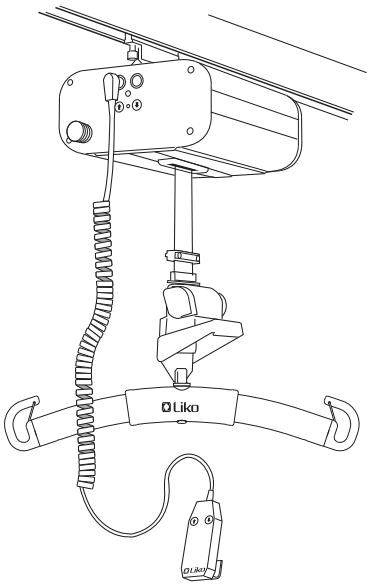
Likorall 242

Instruction Guide

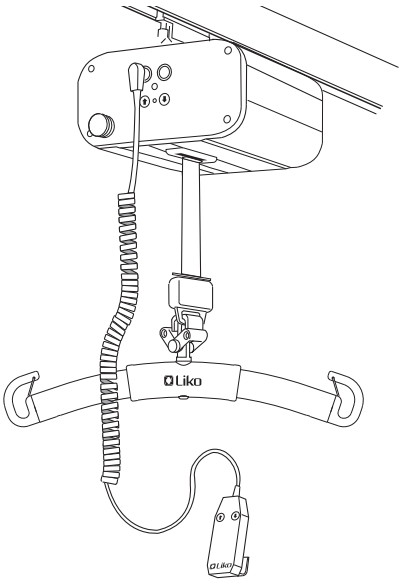
English
7EN120108-02
2008-11-20

Applies to the following models:

Likorall 242 ES	Prod. No. 3122005-3122006
Likorall 242 ES R2R	Prod. No. 3122007-3122008
Likorall 242 S	Prod. No. 3122009-3122010
Likorall 242 S R2R	Prod. No. 3122011-3122012



Likorall 242 ES



Likorall 242 ES R2R

Product Description

Likorall is a stationary lift, often referred to as an "overhead lift". Likorall is mounted on Liko's rail systems, which are adapted to the room(s) they are to be used in. The rail system can be built as a Straight rail, with or without curves, a Traverse system or a Room-to-room system. Liko's rail systems consist of hundreds of components and each part is specifically selected so that every installation is adapted to the room(s) they are to be installed in. The rail system can be either a stationary installation or a freestanding installation, such as the FreeSpan.

Likorall must be installed by authorized personnel and in accordance with installation instructions provided by Liko.

Likorall is intended for lifting and transferring patients; e.g., from the bed to the wheelchair; to and from the floor; for visits to the lavatory and bath; for walking, standing, gait and balance training; for weighing, and for lifting in combination with a stretcher.

The Likorall R2R model (room-to-room) enables transfer of patients between two independent overhead rail systems in separate rooms and without the need for openings above doorways.

Model 242 ES is prepared for wireless handcontrol (IR). Likorall 242 ES can also be equipped with a Transfer Motor, which facilitates motorized transfer along the rail.

A large, comprehensive range of accessories including different types of lift slings in a variety of sizes and models is available for Likorall.

In this document, the person being lifted is referred to as the ”patient” and the person helping them is referred to as the ”caregiver”.

△ is a warning triangle used for situations that demand extra care and attention.

IMPORTANT!
Read instructions for the lift and accessories carefully before use. Lifting and transferring a person always presents a potential risk. A thorough understanding of the contents of instruction guides is essential. Only trained personnel should use the equipment. If you have questions, please contact Liko or your local Liko representative.

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⚠ NOTE!
This instruction guide contains important information about the use of the product.
All personnel who use this product must be thoroughly familiar with the contents of this instruction guide.
Remember to keep the instructions where they are easily accessible for caregivers.

Safety Instructions

Before use make certain that:

- the lift is assembled according to the instructions;
- lifting accessories are correctly applied to the lift;
- the batteries have been charged for at least 8 hours;
- you have read and understood the instruction guides for the lift and lifting accessories;
- personnel using the equipment have received appropriate instructions and training;
- you have selected the correct type, size, material and design of slings and accessories to safely meet the patient´s needs.

Before lifting <u>always</u> make certain that:

- the lift strap is not twisted or worn, and that it moves easily into the power unit;
- the lifting accessories are not damaged;
- the sling is correctly and securely applied to the patient, so that no personal injury can occur;
- the lifting accessory is correctly applied to the lifting equipment;
- the sling´s strap loops are correctly fastened to the slingbar hooks when the sling strap is extended, but before the patient is lifted from the underlying surface.

Likorall 242 ES/ES R2R, 242 S/S R2R are tested by an accredited testing institute and comply with the requirements of directives for medical-technical Class I products (MDD 93/42/EEC).

Likorall complies with the requirements according to IEC 60601-1, IEC 60601-1-2, EN ISO 10535, UL-60601-1 and CAN/CSA C22.2 No.601.1.

Particular care must be taken when using strong sources of potential disturbance, such as diathermy, etc, so that cables are not positioned on or near the lift. If you have questions, please consult the responsible assistive-device technician or the supplier.

Equipment not suitable for use in the presence of flammable mixtures.

Maximum load: 200 kg (440 lbs.)

Technical Data

Maximum load:	200 kg / 440 lbs.
Batteries:	Two 12 V, 2.6 Ah, valve-regulated lead-acid gel-type batteries. New batteries are available from Liko.
Battery charger:	100-240 VAC, 40-60 Hz, max. 600 mA.
Lifting speed:	5 cm/s
Lifting range:	200 cm/78.7 inch. (height adjustable)
Electrical data:	24 V, 12 A
Lift unit dimensions:	340x250x165 mm. LxWxH 13.4x9.8x6.5 inch. LxWxH
Lift unit weight:	13 kg/28.7 lbs (S, ES) 13.2 kg / 29.1 lbs (S R2R, ES R2R)
Emergency lowering:	Electrical and mechanical (not mechanical on R2R)
Intermittent operation:	Int. Op 10/90, active operation max 6 min. Out of a time of 100, active must be less than 10, though not more than 6 min.
Degree of protection:	IP 43

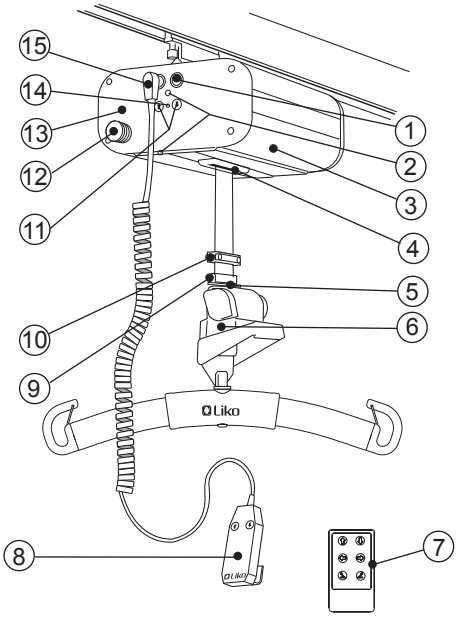
Intended for indoor use.

Type B, according to the degree of protection against electric shock.

Likorall is equipped with a Safety Drum with SFS (Single Fault Safety). The device slowly and safely controls the descent of a patient. The lift strap has a ten-fold safety margin.

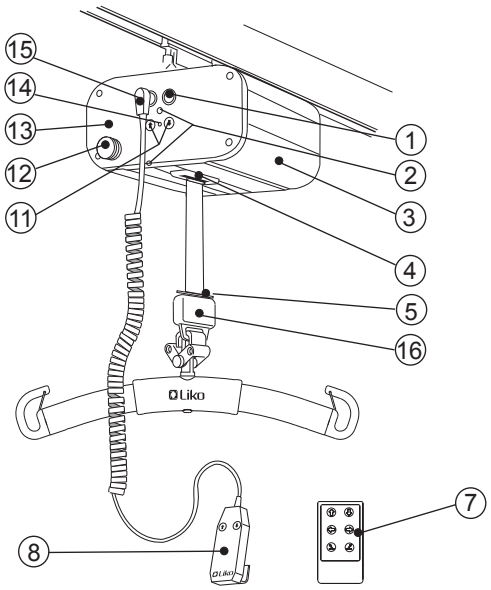
Definitions

Likorall 242 ES, 242 S



1. Contact for Transfer Motor (not model S)/ Contact rail
2. IR receiver (not model S)
3. Lift unit
4. SSP Limit Switch
5. Hang-up
6. Emergency lowering, mechanical (not R2R)
7. Handcontrol Remote IR
8. Handcontrol

Likorall 242 ES R2R, 242 S R2R



9. Movable strap stop (not R2R)
10. Strap stop (not R2R)
11. Emergency lowering / raising (electrical)
12. Emergency stop
13. End plate
14. Charging indicator
15. Contact for handcontrol
16. Q-link (only R2R)

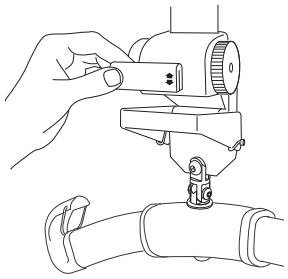
Assembly

Likorall must be assembled and installed by qualified personnel and in accordance with installation instructions provided by Liko.

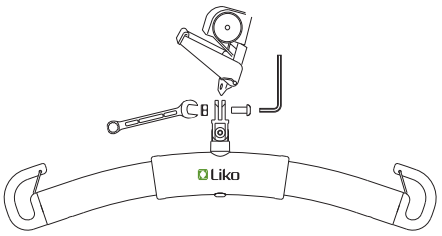
After assembly, check to ensure that:

- lift functions correspond to markings on hand-control.
- both the mechanical and electrical emergency-lowering devices function.
- the SSP Limit Switch is functioning.
- the battery charger functions and the indicator-lamps light during charging.
- the batteries have been charged for 8 hours before the lift is used for the first time.

NOTE! The lift equipment must always be tested with maximum load after installation.

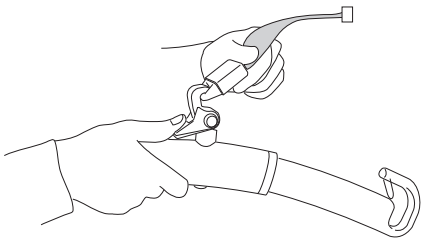


Press the handle reinforcement marked ”Emergency lowering” (included in the bag containing instruction guide) onto the handle of the emergency lowering device (not R2R).



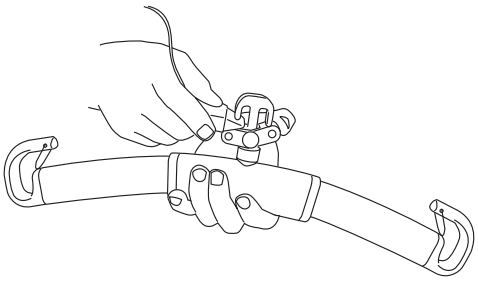
Mounting the lift accessories (not R2R)

Most of Liko lift accessories can be used with Likorall. For mounting, use fitted bolt Ø10x12 and locking nut M8 (special). These are included with lift accessory. Tighten properly.



Changing lift accessories equipped with Quick-release Hook system

Liko's Quick-release Hook system can be used to facilitate the exchange of lift accessories.
Read more on page 9.

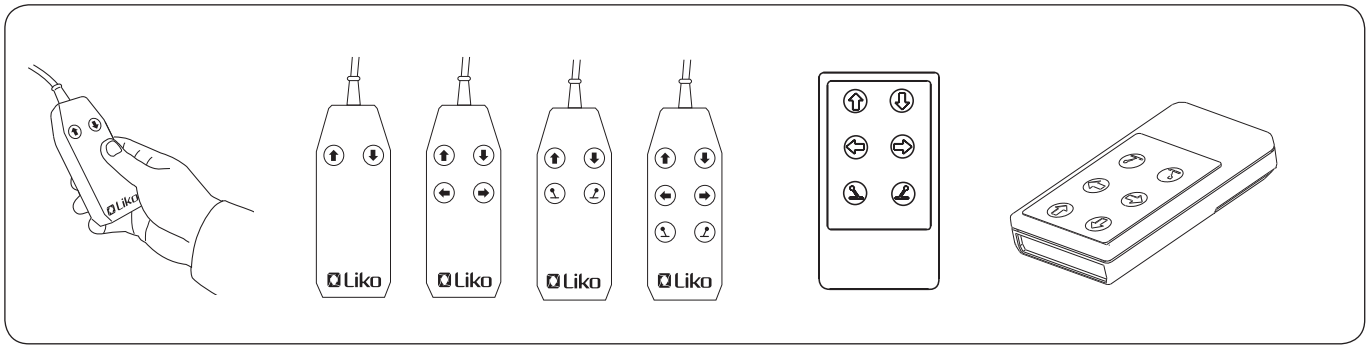


Changing lift accessories, Likorall R2R

The slingbar for Likorall R2R has a double hook for quick connection to the slingbar mount. The double hook has a catch that prevents the slingbar from unhooking unintentionally.

Operation

Several different handcontrols can be used with Likorall. Which handcontrol to choose depends on how the Likorall motor and the railsystems are equipped. Special handcontrols are to be used if a transfer motor and/or rail switches are being used or if there is a need for a wireless operation of the lift.



Operation

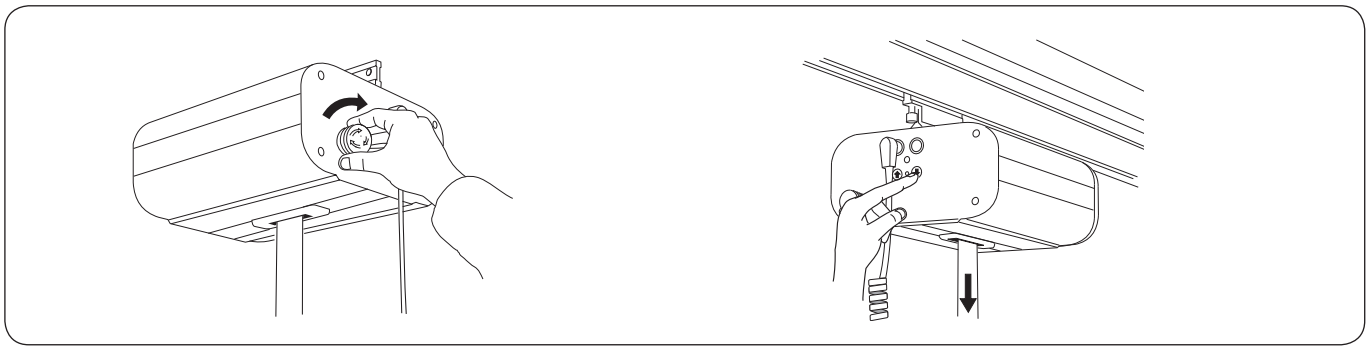
Likorall is operated by lightly pressing the buttons on the handcontrol. Arrows indicate direction. Movement ceases when buttons are released. The handcontrol Likorall with Transfer Motor has four buttons. Travel along the rail is regulated by pressing the directional control buttons ⬅ and ➡. Likorall's handcontrol for control of switches has four, alternatively six, buttons. Switch direction is controlled by the ↖ and ↗ buttons. In the event of malfunction of the handcontrol the lift can be operated by the directional buttons ⬆ and ⬇ on the end plate of the lift unit.

Handcontrol Remote IR Prod. No. 3126060

Likorall 242 can be equipped with a wireless handcontrol. The handcontrol has six buttons and works exactly like the cable-connected handcontrol (see explanation to the left).

The handcontrol normally works within a radius of 2-5 metres from the lift, depending on the angle between the handcontrol and the IR receiver on the end plate of the lift unit.

Handcontrol Remote IR is equipped with replaceable batteries (2 pcs. AAA, LR03).



Emergency stop

To stop in case of emergency: press the red Emergency stop button.

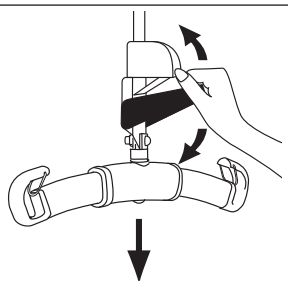
To reset: turn the button in the direction of the arrows until it pops out.

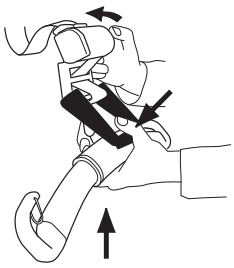
The red button on the end plate of the lift unit is to be used in case of emergency. If the button has been pressed in, the contact between the motor and the source of power supply will disconnect and the lifting movement will stop.

Electrical emergency lowering

In the event of malfunction of the handcontrol or power supply, the emergency-lowering function is activated by pressing the directional button ⬇ on the lift unit.

Always ensure that the patient is lowered to a bed, wheelchair or other suitable location.





Mechanical emergency lowering (not R2R)

Move the emergency lowering handle up and down until the patient has been safely lowered and the lift strap is slack.

After emergency lowering has been performed, the lifting range should be reset, see “Resetting the lifting height”.

Always ensure that the patient is lowered to a bed, wheelchair or other suitable location.

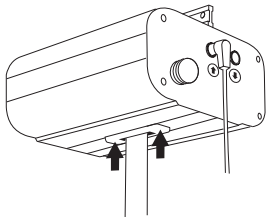
Emergency lowering with Likorall R2R

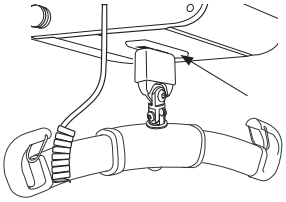
Emergency lowering with Likorall R2R can be done using the buttons on the lift unit, or with the lift unit on the adjacent rail system after transfer (see page 8).

Resetting the lifting height

Adjustment when max. lifting height is too low:

1. Lower the slingbar and place it on a firm underlying surface, so that load is relieved from the lift strap and it slackens.
2. Move the emergency lowering handle, marked “Emergency lowering”, up and down with your left hand. At the same time, apply tension to the lift strap by turning the black knob clockwise with your right hand. Repeat until the desired maximum lifting height is achieved.

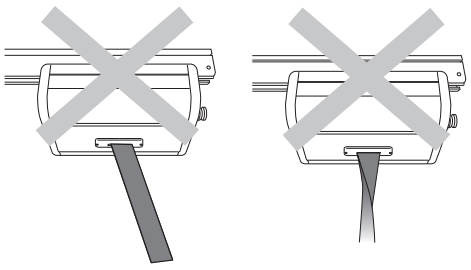


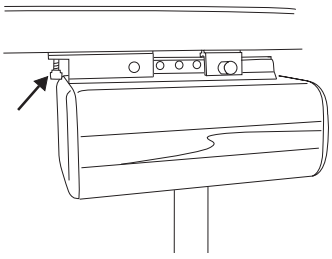


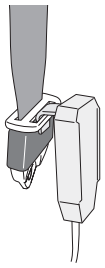
SSP Limit Switch

The lifting movement stops when the SSP Limit Switch on the underside of the lift unit is touched lightly (see illustration).

If Likorall has been run upward to the highest position, creating a physical contact between the SSP Limit Switch and the strap connector alt. Q-link, the SSP Limit Switch will be activated. When the SSP Limit Switch is activated, lifting movement is halted electrically. This protects the lift motor from mechanical strain and also prevents squeeze injuries.







For reliable operation, during lifting, it is important that the lift strap is as close to vertical as possible (i.e., the lift unit is directly above the centre of gravity). The SSP Limit Switch is intended to halt the lifting motion if the lift strap is subjected to strain that may damage it; e.g., if it pulls at a bias or becomes twisted during lifting. If the SSP Limit Switch is activated, so that lifting is interrupted, upward motion can be resumed when the strap is taut again (a slight delay of lifting motion is normal in this event).

Adjustable Friction Brake

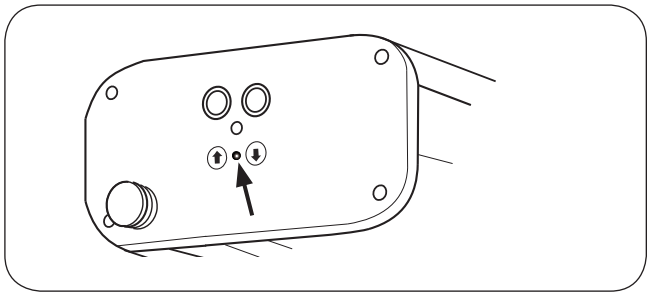
The speed at which the lift unit travels along the rail can be regulated via the friction brake on the carriage. Turn the brake adjustment screw clockwise to increase resistance and counter-clockwise to reduce resistance.

The following carriages are equipped with adjustable friction brakes: Prod. No. 3126011 and 3126015.

Hang-Up Handcontrol hanger

When not in use, the handcontrol can be hung on the Hang-Up.

⚠ Caution: Operate the lift only when tension is applied to the lift strap!



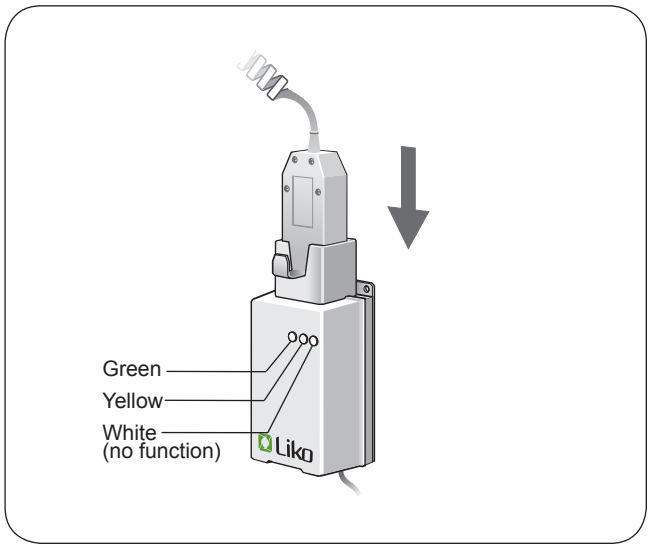
Charge indicator

Likorall has two indicators for low battery charge:

- a buzzer sounds during lifting
- a diode lights up during lifting

The battery should be charged immediately when either of these indicators is activated.

Charging the Batteries



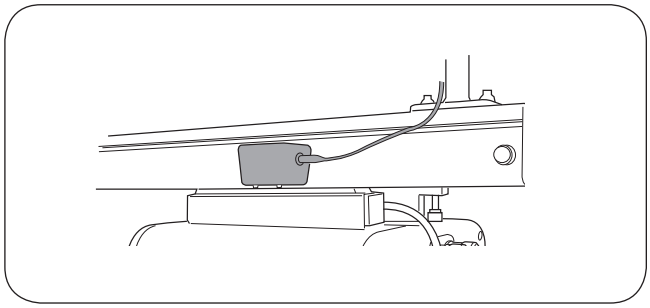
To ensure maximum battery life, it is important the batteries are charged daily. We recommend charging whenever the lift is not in use.

Maximum charge is reached after about 8 hours. Fully charged batteries in perfect condition are good for about 60 normal lifting cycles.

1. Check to ensure that the Emergency stop button is not pressed in during charging.
2. Place the handcontrol in the socket on top of the charger.
3. Plug the charger into a 100–240 VAC wall socket.
4. The green lamp lights to indicate that the charger is connected to the power supply.
5. Charging begins automatically and the yellow lamp indicates that charging is in progress.
6. Once the battery is fully charged, the charger shuts off automatically and the yellow light goes out.

NOTE! If the lift will not be used on a daily basis, the handcontrol should be placed in the charger unit to allow the battery to charge. If the charger unit is not connected to a power supply, press the emergency stop button in to prevent the battery from discharging.

Alternative charging procedure



Multi Station Prod. No. 3126110

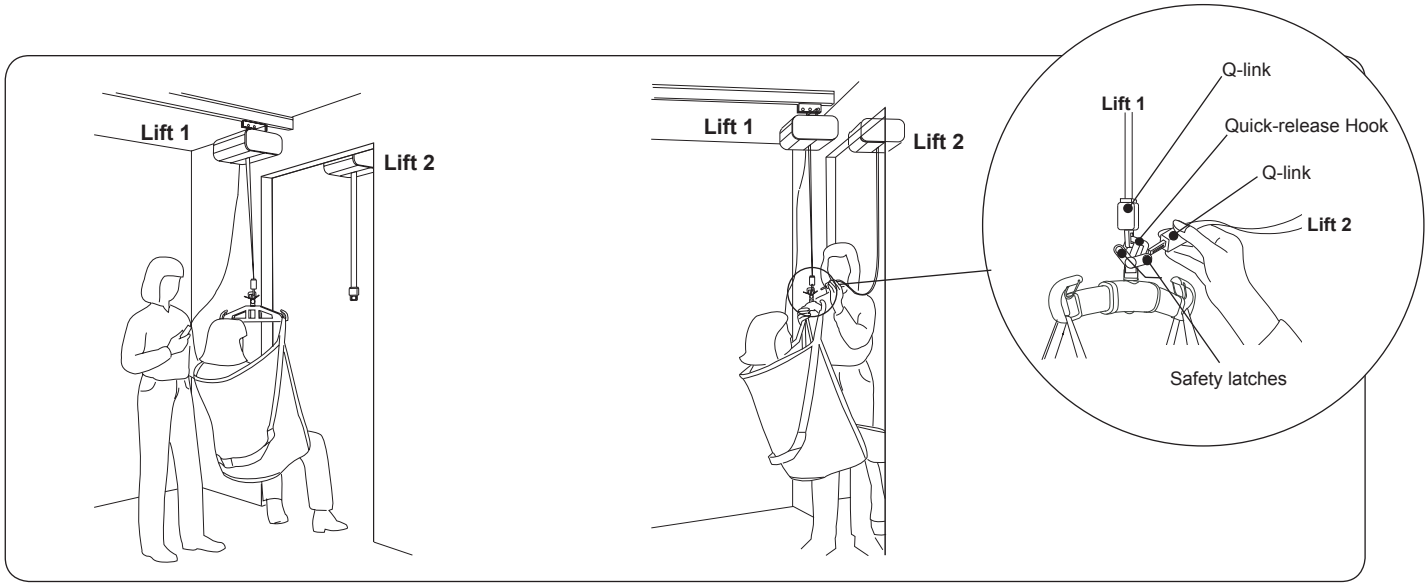
As an alternative to charging via the handcontrol, Likorall can be charged with a Multi Station. In this case Likorall needs to be equipped with a Multi-connector or a Transfer Motor. The batteries are then charged by parking the lift unit in the charging position at the Multi Station.

This charging procedure is also suitable when Likorall is operated by Handcontrol Remote IR.

Pb

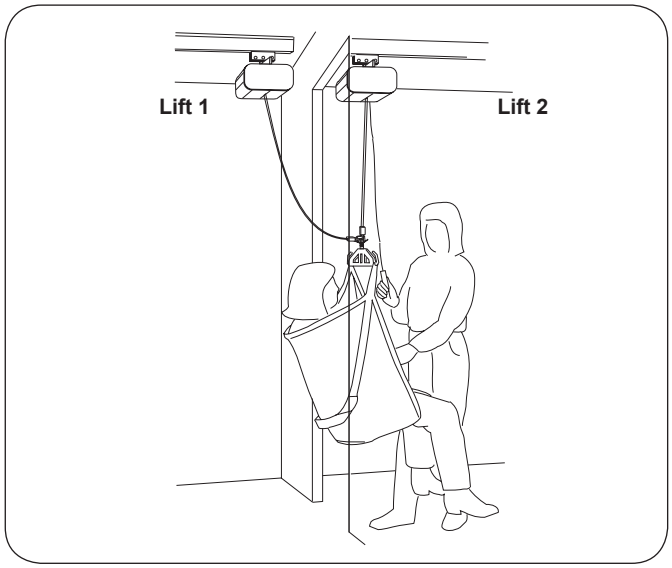
Old batteries are to be left at the nearest recycling station or given to personnel authorized by Liko.

Room-to-room Transfers with Likorall R2R



1. Move Lift 1, with the patient, as close to the doorway as possible.
   Lower the lift as far as possible, bearing in mind the patient's comfort.

2. Move Lift 2 as close to the doorway as possible. Release a sufficient length of the lift strap from Lift 2 and connect it to the slingbar Quick-release hook. Check to make sure that the safety latches of the Quick-release Hook work properly.



3. Raise Lift 2. The patient is now moved successively over to the next room and is then suspended in Lift 2. When tension on the lift strap of Lift 1 has been relieved, it is disconnected from the Quick-release Hook and the transfer to the next room can be completed.

   NOTE! In order to unhook Q-link, it may be necessary to release more of the lift strap from Lift 1.

Maximum Load

Different max. load limits may apply for the different products constituting the compound lift unit: lift, slingbar, sling and other accessories. It´s always the product with the lowest maximum load that determines the max. load for the compound lift unit. For example: A Likorall that is approved for 200 kg (440 lbs) could be equipped with a slingbar that is approved for 300 kg (660 lbs). In this case a max. load of 200 kg (440 lbs) applies for the compound lift unit. Study the markings of the lift and accessory or contact your Liko representative if you have any questions.

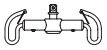
Recommended Lift Accessories

Liko's product range includes many slingbars, slings, stretchers, scales and other accessories to meet most lifting needs. Lifting accessories recommended for use with Likorall are described below.

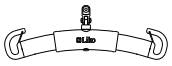
For choice of appropriate slings and other lifting accessories, see e.g., the brochure *"Lifting Accessories".* For further guidance on choosing a sling, consult the instruction guide for the respective sling model. Here, you will find advice on suitable combinations of Liko slingbars and Liko slings.

For advice and information about new products in Liko's product range, contact your Liko representative or visit www.liko.com.

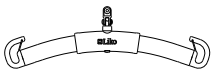
Slingbar Mini 220
Max. 205 kg/450 lbs
Prod. No. 3156005



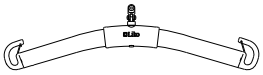
Universal Slingbar 350
Max. 300 kg/660 lbs
Prod. No. 3156074



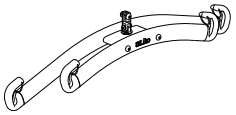
Universal Slingbar 450
Max. 300 kg/660 lbs
Prod. No. 3156075



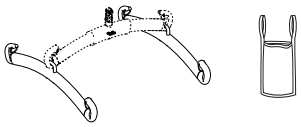
Universal Slingbar 600
Max.300 kg/660 lbs
Prod. No. 3156076



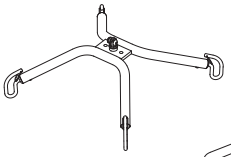
Universal Twinbar 670
Max. 300 kg/660 lbs
Prod. No. 3156077



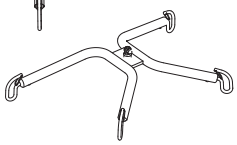
Universal Side bars 450 incl. storage bag
Max. 300 kg/660 lbs
Prod. No. 3156079



Sling Cross-bar 450
Max. 300 kg/660 lbs
Prod. No. 3156021



Sling Cross-bar 670
Max. 300 kg/660 lbs
Prod. No. 3156018

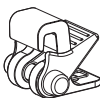


Quick-release Hook

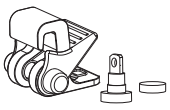
Liko Quick-release Hook system enables quick and easy exchange of lift accessories on Liko's mobile and overhead lifts. Likorall R2R with Q-link can be used with Quick-release Hook, which is mounted on the lift equipment.

Quick-release Hook Universal fits Universal Slingbar 350, 450 and 600 (prod. no. 3156074-3156076). Quick-release Hook TDM (prod. no. 3156502) fits Slingbar Mini 220 (prod. no. 3156005), Sling Cross-bars 450 and 670 (prod. no. 3156021 and 3156018) and Universal Twinbar 670 (prod. no. 3156077).

See "Guide to Liko´s Quick-release Hook system" which can be downloaded at our website www.liko.com. Contact Liko for more information about the use and features of the Quick-release Hook system.

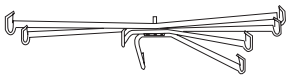


Quick-release Hook Universal
Prod. No. 3156508

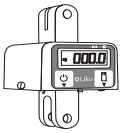


Quick-release Hook TDM
Prod. No. 3156502

Stretchers
All Liko stretcher models can be used in combination with Likorall.
Contact Liko for more information.

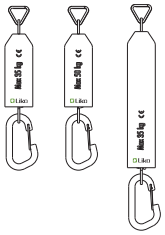


Scale
When weighing persons in Likorall, we recommend the use of LikoScale. The scale is preferably used with Adapter kit LikoScale.
Contact Liko for more information.



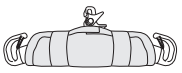
LikoScale 350
Prod. No. 3156228

Support Springs
Elastic springs enable a gentler springing motion that makes gait training easier and more natural. Springs are available in two sizes: Short (Prod. No. 3166512) and Long (Prod. No. 3166511). Both sizes are intented for lifting less than 70 kg (154 lbs.).
For patient weights up to 100 kg (220 lbs.) use Prod. No. 3156513 (short).
See Instruction guide for Liko MasterVest mod. 60, 64, or Liko Lift Pants mod. 92 for more information.



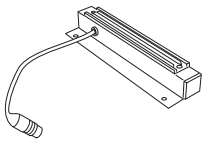
Liko Bathing Chair Prod. No. 3156025
Contact Liko for more information.

Slingbar Cover Paddy 30 Prod. No. 3607001
(fits Universal Slingbar 350, 450 and 600 and Slingbar Slim 350)

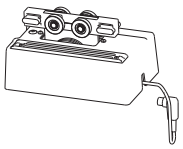


Hang-Up Handcontrol hanger Prod. No. 3156100
10 pcs/set

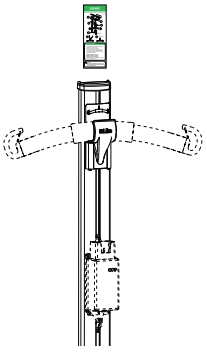
Multi-connector Prod. No. 3126111
The Multi-connector is assembled on the Likorall. Together with the Multi-connector and a Multi Station, Likorall has got a charging function and is able to operate rail switches.



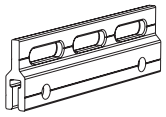
Transfer Motor Prod. No. 3126044
Likorall 243 is prepared for use with the Transfer Motor, which enables motorized transfer of the lift unit along the rail.



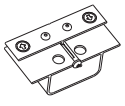
Parking Panel
Parking Panel 600 Prod. No. 3126005
Parking Panel 1500 Prod. No. 3126006
Enclosed with the Parking Panel are short instructions for the most important lift functions, a charger plate on which to fasten the battery charger and a parking bracket for the slingbar.
(Charger and slingbar are not included).

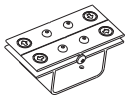


Carriage adapter LR for Quick-release Hook Prod. No. 3126029
The Carriage adapter makes it possible to easily and without tools move a Likorall motor from one rail system to another.
Contact Liko for more information.



Easy Switch
2-button: Prod. No. 3107010
4-button: Prod. No. 3107011
Easy Switch is developed for users/patients who may have a problem with operating the lift with the regular buttons on the handcontrol, due to impaired hand functions.
Easy Switch can easily be mounted on the handcontrol.
Fits with Likorall handcontrols, Prod. No. 3126034, 3126035 and 3126036.





Simple Troubleshooting

The lift doesn't work.	1. Check that the emergency stop button is not pushed in (page. 5). 2. Check the battery charge (page. 7). 3. Check that the handcontrol is firmly connected. 4. *If the lift still does not work satisfactorily contact Liko.*
A repeated signal can be heard from the lift.	1. Charge the battery immediately (page. 7). 2. *If the lift still does not work satisfactorily contact Liko.*
The lift stops in the elevated position.	1. Check that the emergency stop is not pushed in (page. 5). 2. Check the battery charge (page.7). 3. Check that the handcontrol is firmly connected. 4. Use the indicated mechanical (page. 6) or electrical (page. 5) emergency lowering device to lower the patient. 5. *If the lift still does not work satisfactorily contact Liko.*
The lift does not achieve maximal lifting capacity.	1. Charge the battery (page. 7). 2. *If the lift still does not work satisfactorily contact Liko.*
If you hear unusual sounds.	*Contact Liko*.

Care and Maintenance

Care and inspection

For safe and troublefree operation, a few routine procedures should be performed every day the lift is used.

- Visually inspect the lift and check for external damage or wear.
- Check that all screws and lock nuts on the slingbar are tight.
- Check the lift strap for wear and ensure that the strap is not twisted.
- Check the function of the safety latches.
- Check the control function of the lift movement.
- Check that the lifting height is properly adjusted and that the emergency lowering function is working properly.
- Charge the batteries every day the lift is used, and check charger function.

When necessary, clean the lift with a moist cloth, using common surface cleaners or disinfectants. **NOTE! Do not use cleaning products that contain phenol or chlorine, since these can eventually damage aluminum and polyamide material.**

Service

Likorall should be thoroughly inspected for wear of parts at least once per year. Inspection should be in accordance with Liko service manual and conducted by authorized personnel.

⚠IMPORTANT!

Repairs and maintenance may only be carried out by personnel authorized by Liko, using original Liko spare parts.

Service agreements

Liko invites you to sign a service agreement for regular maintenance and testing of your Liko products. Contact your local Liko representative for more information.

Transport and Storage

During transportation, or when the patient lift is not to be used for some time, the emergency stop button should be pushed in. Store the lift at a temperature exceeding freezing point and at normal relative humidity (no more than 60%).

Recycling

For instructions on how Likorall should be recycled, please visit our website www.liko.com.

Product changes

Liko's products are constantly being updated and refined. Liko reserves the right to change aspects of the products without prior notice. Contact your local Liko representative for updated information and advice.

Made in Sweden

Liko is quality certified according to ISO 9001 and its equivalence for the medical device industry, ISO 13485.
Liko is also certified according to environmental standard ISO 14001.

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Liko
A Hill-Rom Company

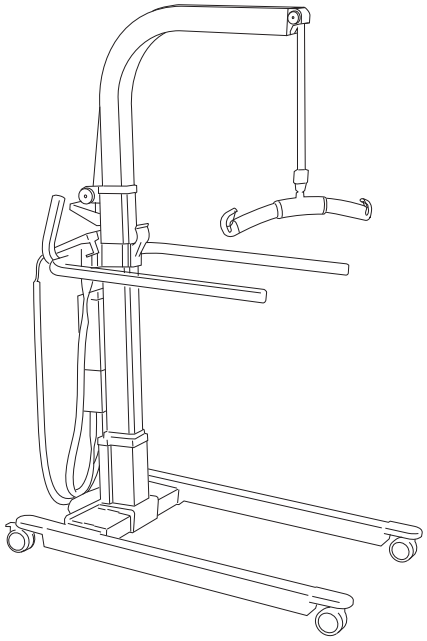
Golvo™

Instruction Guide

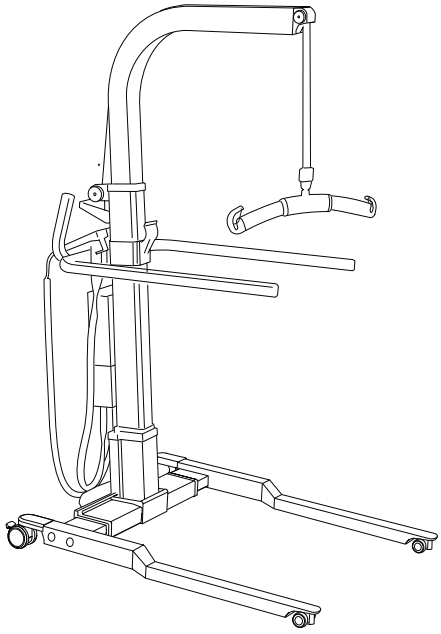
English
7EN140102-02
2008-10-22

Applies to the following models:

Golvo 7000 ES	Prod. No. 2000009
Golvo 7007 ES	Prod. No. 2000010
Golvo 7007 LowBase™	Prod. No. 2000061



Golvo 7000 ES/7007 ES



Golvo 7007 LowBase™

Product Description

Golvo is an electrically powered mobile lift, i.e., both raising and lowering of the lift arm and width adjustment of the base are done with electric motors.

To ensure maximum safety for caregivers and patients, Golvo is equipped for both mechanical and electrical emergency lowering. All Golvo lifts are equipped with convenient armrests, to assist both the caregiver and the patient. If needed, the armrests can be folded down into a support position.

Golvo is also available in a design with an extra low base; Golvo LowBase™. This model is recommended for lifting to and from beds/barrack-beds that have a ground clearance of 58-110 mm (2.28-4.3 inch.).

Golvo can be used in most lifting situations: for example, between bed/wheelchair, to/from the toilet, in bath and shower, to/from the floor, for weighing patients and for horizontal lifting.

A comprehensive range of accessories are available for Golvo, including sling bars of different widths, slings in many sizes and fabrics, and accessories for ambulation/gait training, static weight-bearing, weighing patients, and for emergency room use and horizontal lifting, etc.

In this document, the person being lifted is called the ”patient” and the person helping is called the ”caregiver”.

△ are triangles used to warn of situations that demand extra care and attention.

IMPORTANT!
Carefully read these instructions and the instructions for the particular lifting accessory being used. Lifting and transferring patients always presents a potential risk. It is essential to thoroughly understand the content of these manuals, and that only trained persons use the equipment. If you have questions, please contact Liko or your local Liko representative.

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△ **NOTE!** This instruction guide contains information that is important for users of the product. A complete understanding of the contents of the instruction guide is essential, and only personnel who are well informed should use the equipment. Remember to keep the instruction guide readily accessible for users of the product.

Safety Instructions

Before using the lift for the <u>first</u> time, make certain that:

- the lift is assembled according to the instructions
- the lifting equipment is correctly applied to the lift
- the batteries have been charged for at least 6 hours
- you have read the instruction guides for the lift and lifting accessories
- personnel using the equipment have received appropriate instructions and training.

Before lifting <u>always</u> make certain that:

- the lift strap is not twisted or worn and that it can move freely in and out of the lift unit
- you have selected the correct type, size, material, and design of slings and accessories to safely meet the patient's needs
- lifting accessories are not damaged
- the lifting accessory is correctly applied to the lifting equipment
- the lifting accessory is correctly and securely applied to the patient, so that no personal injury can occur
- the sling's strap loops are correctly fastened to the slingbar hooks when the sling strap is extended, but before the patient is lifted from the underlying surface.

△ **Never leave a patient unattended in a lifting situation!**

Golvo 7000 ES/7007 ES/7007 LowBase are tested by an accredited testing institute and comply with the requirements of the directives for medical-technical Class 1 products (MDD 93/42/EEC).

Golvo 7000 ES/7007 ES/7007 LowBase comply with the requirements according to IEC 60601-1, IEC 60601-1-2, EN ISO 10535, UL-60601-1 and CAN/CSA C22.2 No. 606.1.

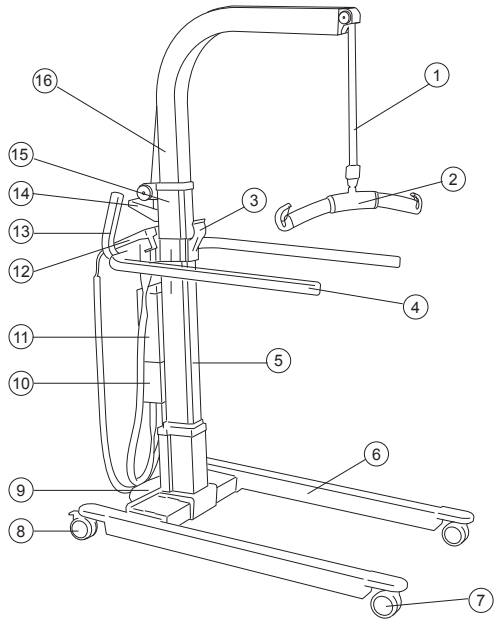
Particular care must be taken when using strong sources of electromagnetic interference, such as diathermy, etc, so that cables are not positioned on or near the lift. If you have questions, please consult the responsible assistive-device technician or the supplier.

This equipment is not suitable for use in the presence of flammable mixtures.

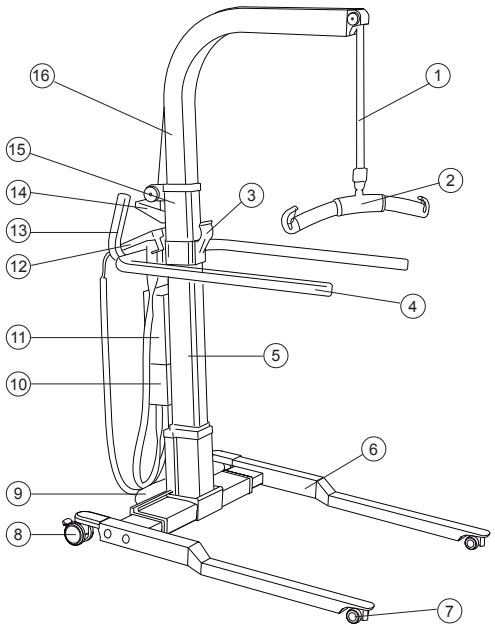
Maximum load: 200 kg (440 lbs.)

Definitions

Golvo 7000 ES / 7007 ES



Golvo 7007 LowBase™



1. Lift strap
2. Sling bar with safety latches
3. Parking bracket for sling bar
4. Foldable armrest
5. Mast with built-in motor for lifting
6. Base
7. Front wheel
8. Rear wheel with brake
9. Motor for base-width adjustment
10. Control box with emergency stop, built-in charger and electrical emergency lowering/ raising
11. Battery box
12. Hand control
13. Manoeuvering handles
14. Emergency lowering (mechanical)
15. Product decal
16. Lift arm

Technical Data

Lifting speed:	Two speed levels: 4.8 cm/s (1.9 inch./s) and 3.2 cm/s (1.3 inch./s); both speed levels without load.
Batteries:	Two 2.9 Ah, 12 V, valve-regulated lead-acid gel type batteries. New batteries are available from supplier.
Battery charger:	Built-in charger for 100-240 V AC, 50-60 Hz, max 400 mA.
Lift motor:	24 V, 6.5 A. Manufactured by Liko with planetary gearing and safety nut (prevents excessive wear).
Motor for width adjustment:	24 V, 3.5 A. Geared motor.
Wheels:	Standard front: 75 mm twin wheels. Standard rear: 75 mm lockable twin-wheels.
Material:	Anodized aluminium.

Emergency lowering:	Mechanical and electrical.
Intermittent operation:	Int. Op 10/90, active operation max 2 min. Out of a time of 100, active must be less than 10, however not more than 2 min.
Degree of protection:	IP 43
Sound level:	53 dB

This device is built for indoor operation.

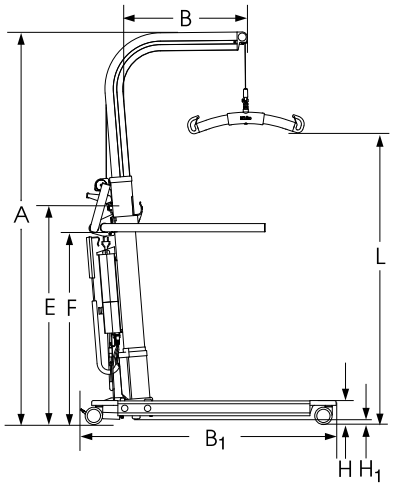
Type B according to the degree of protection against electric shock.

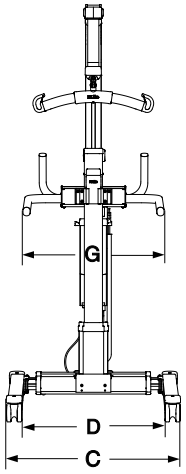
Class II equipment.

Patented

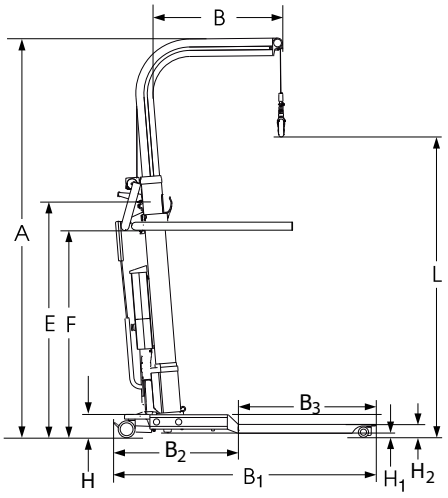
Measurements

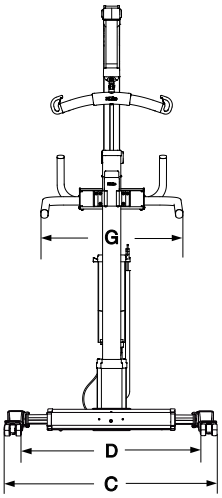
Golvo 7000 ES/7007 ES





Golvo 7007 LowBase™





Maximum load and weight in kg. Measurement in mm.

Model	Wheel diameter	Max. load	L Max	A Max	A Min	B	B^1	B^2	B^3	C	D	E	F	G	H	H_1	H_2	Weight	Turning diameter
Golvo 7000 ES	75/75	200	1750	1990	1340	540	1120	-	-	670-950	530-810	960	840	600	110	23	-	42	1240
Golvo 7007 ES	75/75	200	1850	2080	1440	580	1190	-	-	750-1020	620-900	1060	940	600	110	23	-	44	1330
Golvo 7007 LowBase™	46/75	200	1850	2080	1440	580	1190	590	600	750-1020	620-900	1060	940	600	110	20	60	46	1330

Lifting range (1260 mm) is adjustable. See page 9.

Maximum load and weight in lbs. Measurement in inches.

Model	Wheel-diameter	Max. load	L Max	A Max	A Min	B	B_1	B_2	B_3	C	D	E	F	G	H	H_1	H_2	Weight	Turning diameter
Golvo 7000 ES	2.96/2.96	440	69	78	53	21	44	-	-	26-38	21-32	38	33	24	4.3	1	-	93	49
Golvo 7007 ES	2.96/2.96	440	73	82	57	23	47	-	-	30-40	24-35	42	37	24	4.3	1	-	97	52
Golvo 7007 LowBase™	1.8/2.96	440	73	82	57	23	47	23.2	23.6	30-40	24-35	42	37	24	4.3	0.8	2.4	101	52

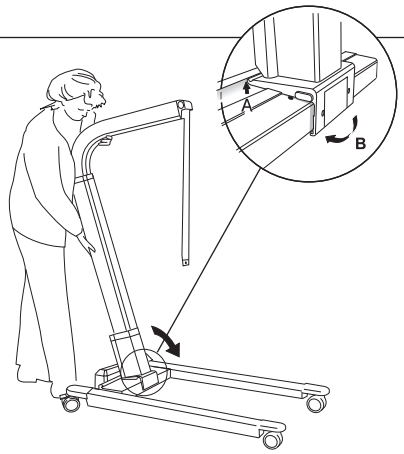
Lifting range (49.6 inches) is adjustable. See page 9.

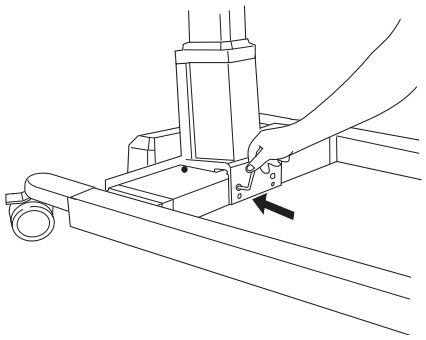
Assembly

Before assembly, make sure you have the following parts and tools:

- mast with lift arm, motor for lift arm, control box and sling bar with bolt and locking nut (M8)
- armrest
- base including motor for base width adjustment
- battery box, including holder for charger cable
- hand control with cable
- bag containing instruction guide, tag marked "Emergency lowering", charger cable and extension cable
- two M6 screws
- tools: Wrench: 17 mm
  Allen wrench: 4, 5 and 6 mm

△ Lock the wheels before you begin assembling the lift.





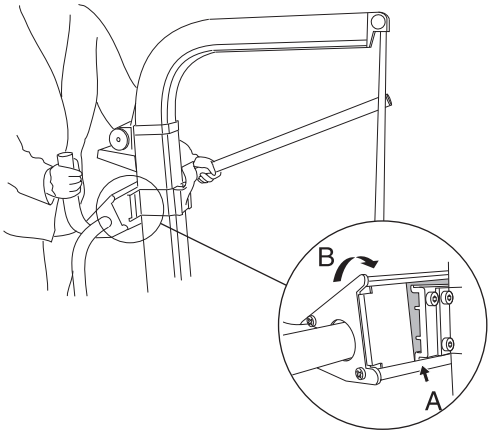
1. Start by unscrewing the transport safety plate (metal plate) at the lower edge of the mast. Then throw away the safety plate, the screws and the red information sticker attached to the safety plate.

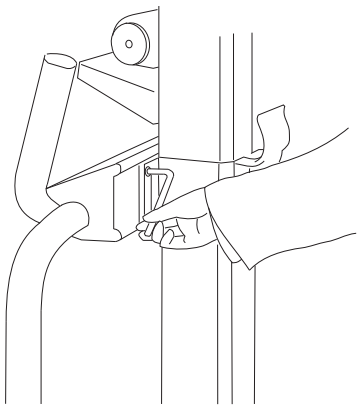
A) Place the mast on the center beam of the base, between the two black plastic caps.

B) Push the mast forward as shown in the illustration above until it snaps onto the center beam.

2. Secure the mast with two M6 screws (enclosed) in the upper holes on the mast.

   NOTE! Do not place any screws in the lower holes!

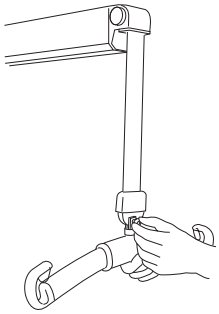


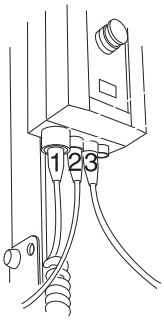


3. A) Place the armrest unit in the bracket on the mast, inserting it into the lower track first.

   B) Lower the armrest unit, pressing on it until it snaps onto the upper track. Note that none of the premounted M8 screws should be completely unscrewed, although you may need to loosen some of them.

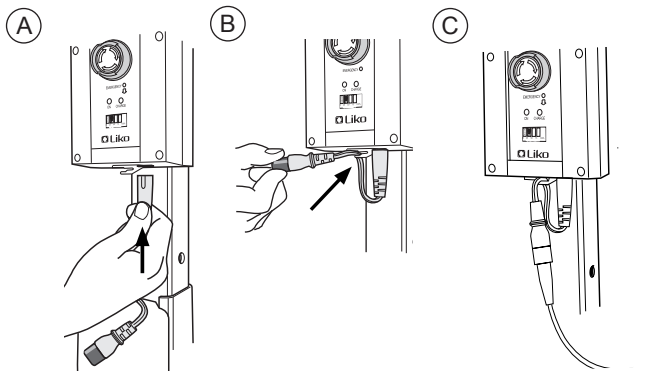
4. Secure the armrest by tightening the two premounted M8 screws.

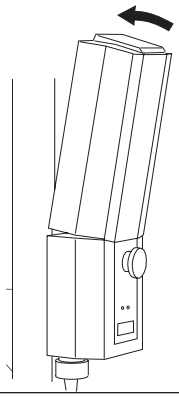




5. Assemble the sling bar (or other accessory) using M8 screws and locking nut (enclosed). Make certain to turn the screws 2 mm (0.08 inch.) past the lock function on the nut. Do not tighten so much that the sling bar connector cannot move in relation to the locking plate.

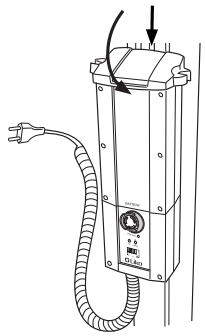
6. Connect the cables to the control box as follows:
   - Cable for hand control to socket number 1.
   - Cable for lift motor to socket number 2.
   - Cable for base motor to socket number 3.

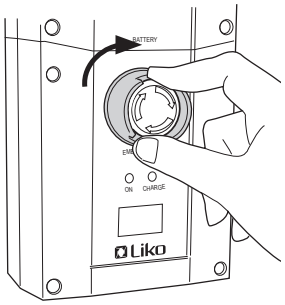


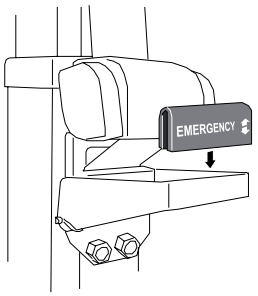


7. A) Connect the extension cable for the charger cable to the control box.
   B) Insert it in the tension clip on the underside of the control box.
   C) Finally, connect the charger cable to the extension cable.

8. Place the battery in its holder above the control box. Check that the battery locks into the holder (audible click).







9. Mount the holder for the charger cable. Hook it on the outer edge and press down until you hear a 'click'.

10. Reset the emergency stop by turning the button in the direction indicated by the arrows.

11. Press the tag marked "Emergency" securely into place on the emergency lowering device.

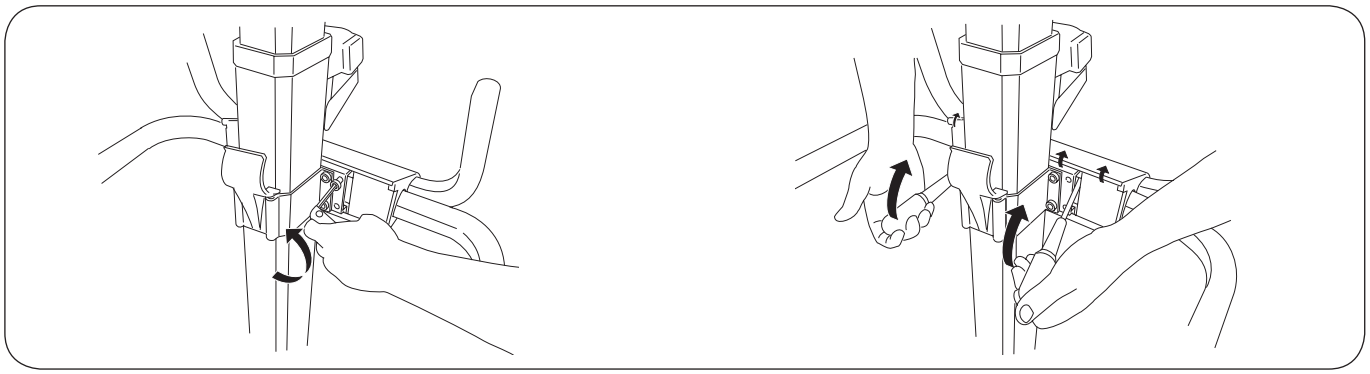
After assembly, check to ensure that:

- the lifting motions correspond with the buttons on the handcontrol
- the emergency lowering works properly (mechanical and electrical)
- wheel brakes work properly
- the width adjustment of the base works properly
- the indicator lamps on the front of the control box light during charging.

Disassembly

1. Start by loosening the sling bar or other accessory mounted on the lift.

2. Loosen the armrest holder as described below:



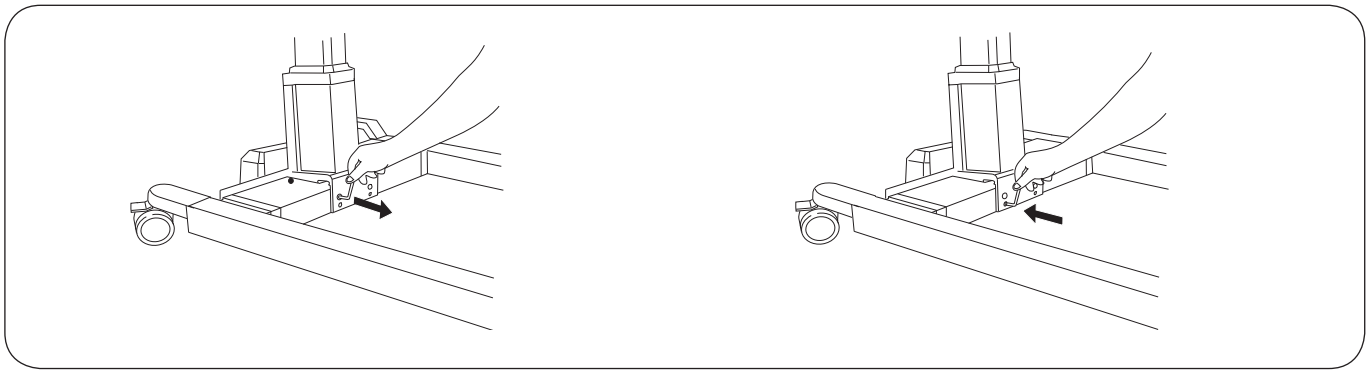
A. Loosen both of the M8 screws on each side of the mast.

B. Remove the armrest holder by using two screwdrivers.

3. Release cables for the hand control, the lift motor and the motor for base adjustment.

4. Remove the mast:

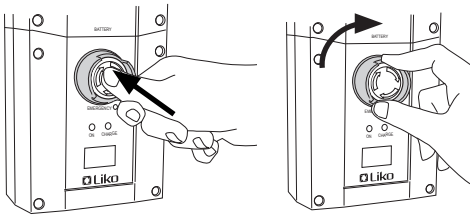
△ **When the mast is free from the base it must be supported so it does not fall.**

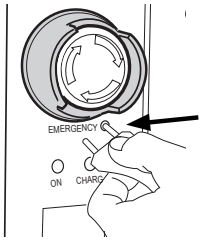


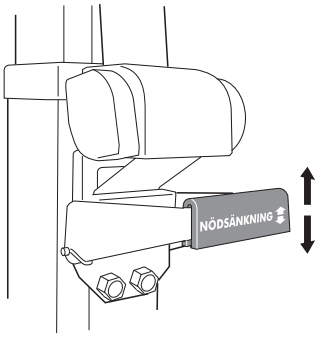
A. Remove both of the safety screws from the upper holes on the mast.

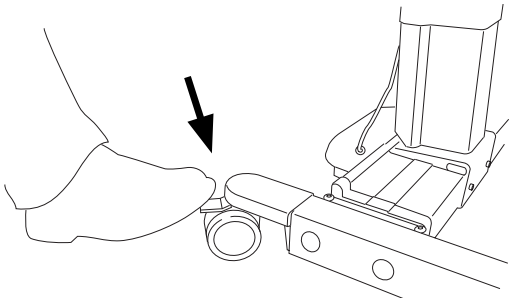
B. Screw in the safety screws in the lower holes on the mast. This releases the mast from the base and it can now be taken down.

Operation









Operation

Operate the lift using the pushbuttons on the hand control.

For raising and lowering, press either of the two upper pushbuttons. The direction in which the arrows are pointing applies when the hand control is held as shown in the illustration. The thicker sets of arrows refer to the maximum lifting speed. The thinner arrows refer to the lower lifting speed. The lifting motion ends as soon as the push button is released.

For base-width adjustment, press either of the two lower push-buttons:

Wider

Narrower.

Emergency stop

To activate

Press in the red button on the control box.

To reset

Turn the button in the direction of the arrows.

Electrical emergency lowering/raising

For electrical emergency lowering/raising, use a thin object and press into the hole marked "Emergency" on the control box.

△ The object used to press must not be too sharp since this might cause damage to the control box!

Mechanical emergency lowering

1. Emergency lowering should always take place over a bed, wheelchair, or other appropriate place.
2. To operate, pull down the handle marked “Emergency Lowering” and then release the handle upward. Continue pumping the handle until the patient in the lift is on a stable surface. Press down on the sling bar and continue to pump the handle down and up until the sling bar is low enough to permit the sling's strap loops to be unhooked.

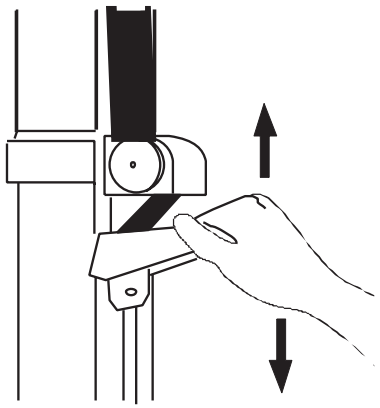
Locking the wheels

The rear wheels can be locked for rotation and lateral movement. To lock the wheels, press down the brake lever with your foot. To release the brakes, press up the brake lever with your foot.

During lifting, wheels should remain unlocked so that the lift may shift to the patient’s center of gravity. The wheels should, however, be locked if there is a risk for the lift moving into the patient, for example when lifting from the floor.

△ Locked wheels during lifting increases the risk of the lift tilting over.

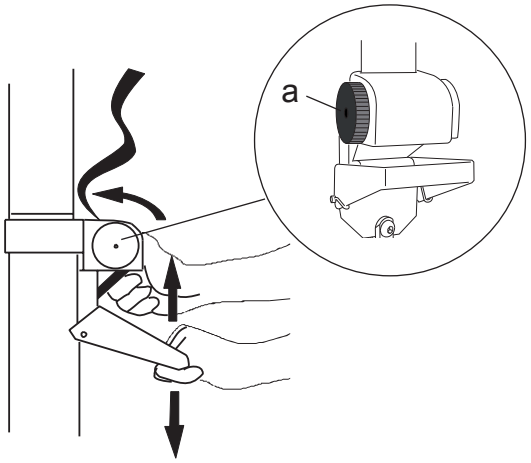
△ CAUTION! Due to the risk for injury, never use your hands to lock the foot brake!



Setting the lifting range

If you need to move the sling bar closer to the floor, you can do this by using the mechanical lowering device to extend the lift strap. Do not extend the lift strap more than necessary since this also influences the maximum lifting height. For example, when lifting a patient from the floor it may be necessary to lower the lifting range if the sling's strap loops do not reach the hooks of the sling bar even when the lift arm is in its lowest position.

Do the following: Hold down the red emergency lowering handle while simultaneously pulling down the sling bar with the other hand. This extends the lift strap and lowers the sling bar. Continue until you achieve the needed length.

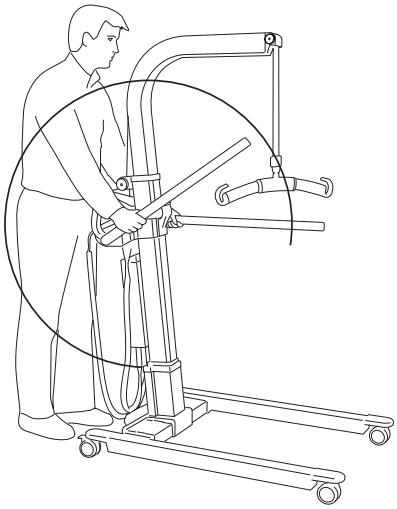


After mechanical lowering / Resetting the lifting range

If you extend the lift strap while testing/using the emergency lowering function, the height of the lifting range is lowered. To reset the maximum lifting height, you must re-establish the original length of the lift strap.

Do the following:

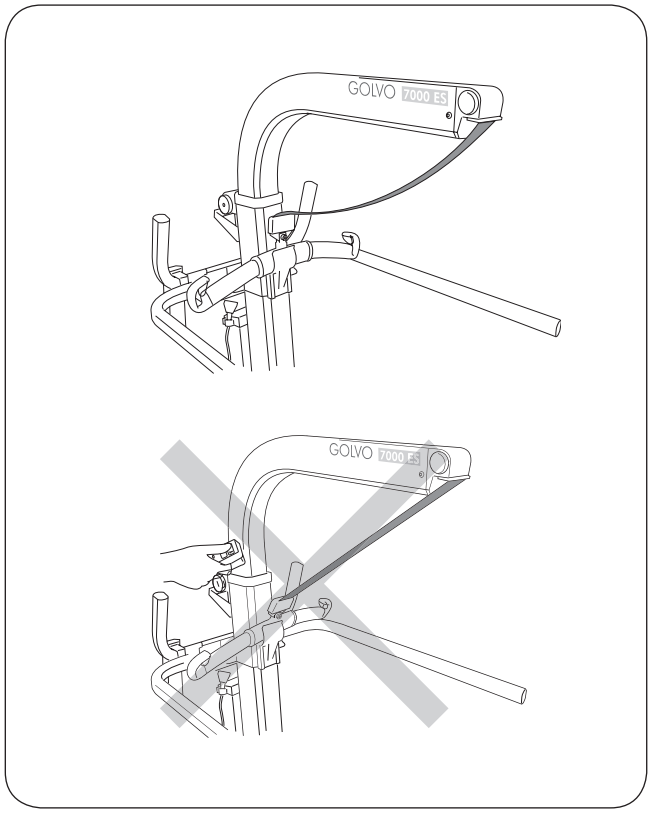
1. Unweight the lift strap above the emergency lowering device by placing the sling bar on the lift mast or by having another person holding up the sling bar to keep the lift strap slack.
2. Move the emergency lowering handle down and up with one hand, while turning the black knob clockwise (tightening the lift strap) with your other hand. Repeat the action until the red mark on the lift strap is slightly above the emergency lowering device.



Armrest

If needed, the armrests can be folded down into a support position. The armrests have two functions: to give the patient a greater sense of security and to make it easier for the caregiver to move the lift.

△ CAUTION! When moving a patient in the lift between different rooms, the armrests should be placed in the support position!



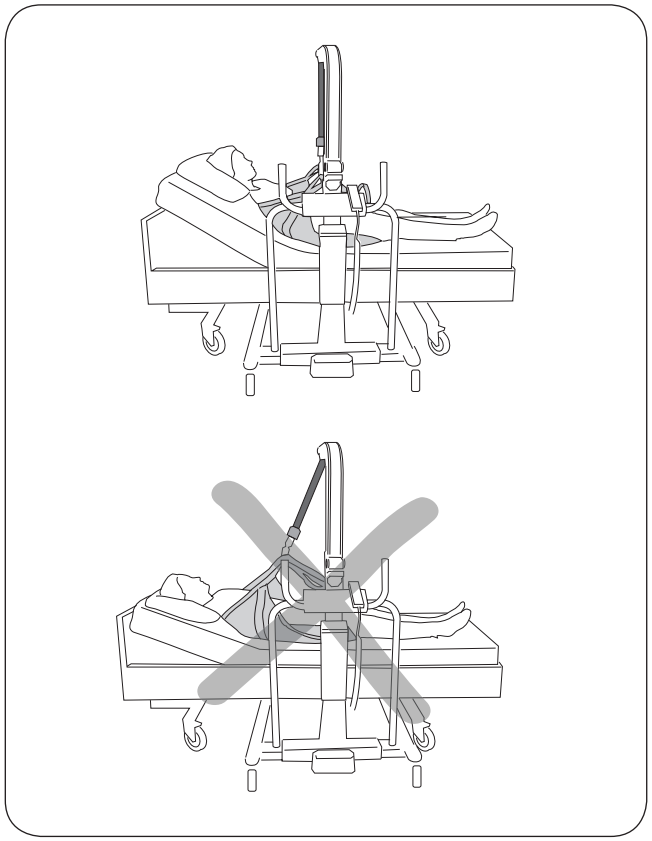
Parking the sling bar
When the lift is not being used, or when moving an empty lift, the sling bar can be placed in the parking bracket.

The parking bracket is intended for use with Universal SlingBar 350, 450 and 600 (all models).

△ Important when using the parking position:
Never raise the lift arm while the sling bar is parked in the parking bracket since this might cause personal injury or damage on the lift if the sling bar suddenly releases from the hook and swings forward.

Transfers from a bed

Always make certain that the lift strap is vertical and parallel to the mast. To achieve this, Golvo should be placed correctly under the bed. Adjust the width and/or change the position of Golvo in relation to the base of the bed to achieve the correct position.



Check that the lift strap is vertical during the lift.

Do not start the lift unless the sling bar is well balanced. An unbalanced load leads to wear and tear on the lift strap. It may also cause instability of the lift during the lift motion.

△ An unbalanced load increases the risk of the lift tilting over!

Charging the batteries

For maximum battery life, batteries must be charged regularly. We recommend charging after use or each night.

Maximum charge is reached after about 6 hours. When the batteries are fully charged, the charger disconnects automatically. **NOTE! A yellow indicator lamp on the control unit lights constantly during charging. When the batteries are fully charged, the yellow lamp shuts off. If this lamp continues to light after 8 hours, the batteries probably need to be replaced. Discontinue charging and replace batteries.**

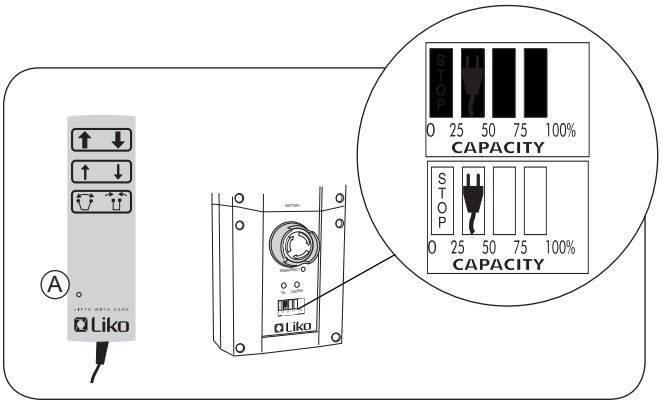
Never charge batteries in a wet area!

If the lift is not in daily use, we recommend that the emergency stop be pressed in after the lift has been used. This breaks the current and conserves battery power. Make sure the lift is fully charged before pressing in the emergency stop.

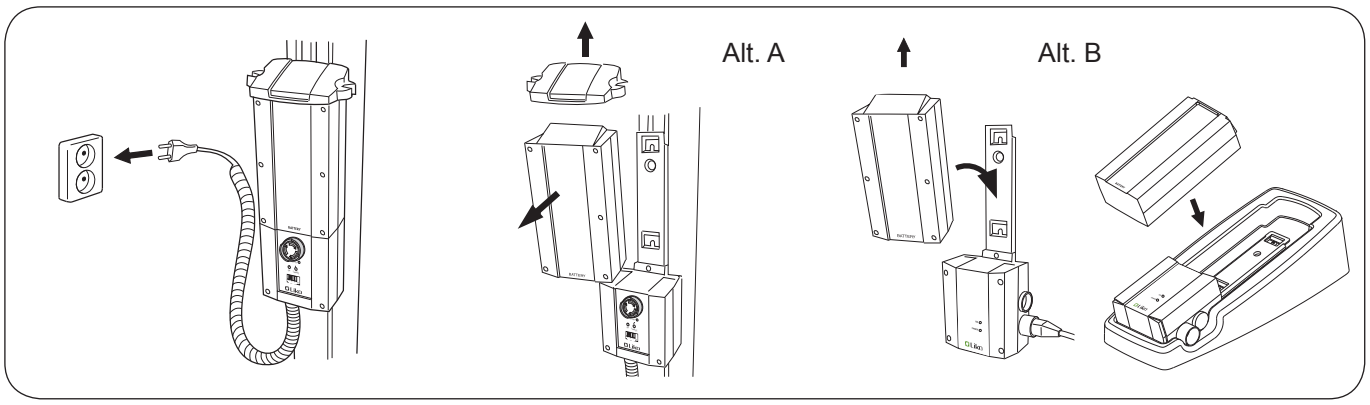
Battery capacity

If the battery needs charging, a beep tone will sound and a lamp (A) is lit on the handcontrol. There is, however, enough power left in the battery for a few more lifts.

A display on the control box shows the current battery capacity. When all fields of the display are black, the battery is fully charged. When a plug symbol appears (see illustration), the battery must be re-charged immediately.



Alternative charging procedures



With built-in charger:

Plug the charger cable into a power socket (100-240 V AC). Check that the yellow lamp on the control box lights (indicates charging).

If the charger cable is stretched out it should be replaced to avoid the risk of the cable getting caught and tear.

With wallmounted charger or table charger housing:

Loosen the holder for the charger cable. Remove the battery box from the control box by loosening the locking device on top of the battery box.

Alt. A. Place the battery box on the wallmounted charger. Check that the charger is plugged into the power socket (100-240 V AC) and that the yellow lamp on the front of the charger lights (indicates charging).

Alt. B. Place the battery box on the charger in the table charger housing. Check that the charger is plugged into the power socket (100-240 V AC) and that the yellow lamp on the front of the charger lights (indicates charging).

Note! The lift does not operate when the charger cable is plugged into a power socket.

Pb

Old batteries are to be left at the nearest recycling station or given to personnel authorized by Liko.

Maximum Load

Different maximum allowable loads may apply to different products on the assembled lift system: lift, sling bar, sling and other accessories. For the total lift system, the lowest max. allowable load indicated for the respective products on the system always applies. For example: A Golvo that is approved for 200 kg (440 lbs.) may be equipped with a lifting accessory that is approved for 300 kg (660 lbs.). In this case, the applicable max. load is 200 kg (440 lbs.) for the total lift system. Study markings on the lift and lifting accessories or contact your Liko representative if you have any questions.

Recommended Lifting Accessories

△ Using other lifting accessories than those recommended below may induce risk.

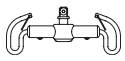
Sling bars and accessories recommended for use with Golvo are described below.

Changing sling bars and adding extra accessories affects the maximum lifting height of the lift. Before changing sling bars and accessories, it is important to ensure that it will still be possible to achieve the desired lifting height for situations in which the lift will be used.

For choice of appropriate slings and other lifting accessories, see e.g., the brochure ”Lifting accessories”. For further guidance on choosing a sling, consult the instruction guide for the respective sling model. Here you will find advice on suitable combinations of Liko sling bars and Liko slings.

Contact your Liko representative or visit www.liko.com for advice and information on Liko’s product range.

SlingBar Mini 220
Max 205 kg / 450 lbs.
Prod. No. 3156005

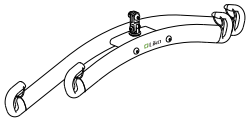


Universal SlingBar 350
Max 300 kg / 660 lbs.
Prod. No. 3156074

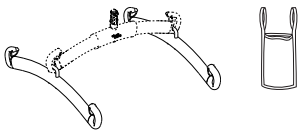
Universal SlingBar 450
(Standard for Viking L)
Max 300 kg / 660 lbs.
Prod. No. 3156075

Universal SlingBar 600
Max 300 kg / 660 lbs.
Prod. No. 3156076

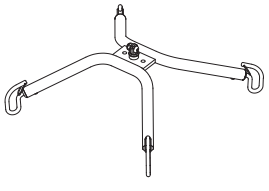
Universal TwinBar 670
Max 300 kg / 660 lbs.
Prod. No. 3156077



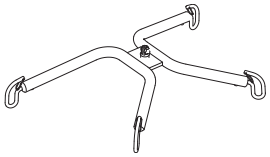
Sling SideBars 450
incl. storage bag
Max 300 kg / 660 lbs.
Prod. No. 3156079



Sling Cross-bar 450
Max 300 kg / 660 lbs.
Prod. No. 3156021

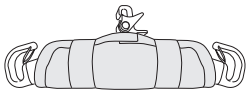


Sling Cross-bar 670
Max 300 kg / 660 lbs.
Prod. No. 3156018



SlingBar Cover Paddy 30 Prod. No. 3607001

(fits Universal SlingBar 350, 450 and 600 and SlingBar Slim 350)

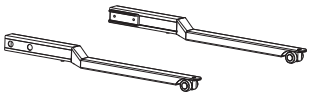


Bag for SlingBars Prod. No. 2001025

Golvo 7007 LowBase Kit Prod. No. 20090071

This reconstruction kit enables the lift to be adapted to beds /barrack-beds with a very low ground clearance, 58-110 mm (2.28-4.3 inch.).

Contact Liko for more informtion.



Quick-release Hook

Liko's Quick-release Hook system enables quick and easy exchange of lifting accessories on Liko's mobile and stationary lifts. Golvo requires Q-link for use with Quick-release Hook.

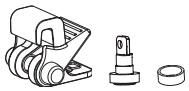
Quick-release Hook Universal fits Universal SlingBar 350, 450 and 600 (Prod. No. 3156074-3156076). Quick-release Hook TDM fits Sling Cross-bar 450 and 670 (Prod. No. 3156021 and 3156018) and Universal TwinBar 670 (Prod. No. 3156077).

When a sling bar mounted with the Quick-release Hook system is used, the lifting height will be 33 mm (1.3 inch.) shorter than with a permanently mounted sling bar.

See "Guide to Liko´s Quick-release Hook System", which can be downloaded from our website, www.liko.com, or contact Liko for more information on the advantages and use of the Quick-release Hook system.

Quick-release Hook Universal

Prod. No. 3156508



Quick-release Hook TDM

Prod. No. 3156502

Q-link

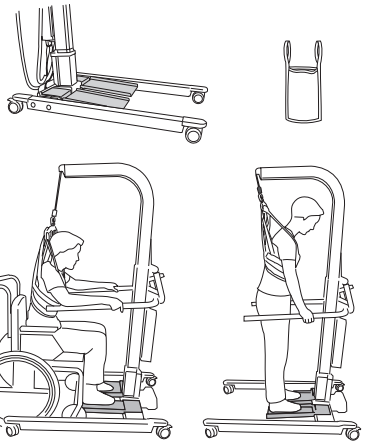
Prod. No. 3156509

Foot trays, incl. storage bag Prod. No. 2001010

A set of foot trays are available as an accessory and can be easily attached to the Golvo base. No tools are needed.

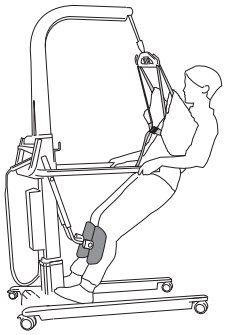
Using the foot trays in combination with Liko MasterVest enables transfer of the patient without requiring him/her to walk.

For more information on how to use MasterVest, see the instruction guide for Liko MasterVest, mod. 60, 64.



Standaid Set Prod. No. 2001020

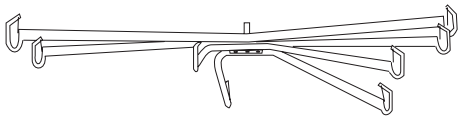
For patients with sufficient body stability, the Standaid Set can be used for shorter transfers, for example between a wheelchair and a toilet, or between a bed and a wheelchair. The patient is lifted to a semi-standing position with the help of SafetyVest or the SupportVest, behind the back and under the arms.



Stretchers

Most Liko stretcher models can be used in combination with Golvo.

Contact Liko for more information.



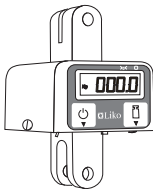
Liko OctoStretch
Prod. No. 3156055

Scale

In need of weighing patients in combination with Golvo, we recommend LikoScale 350. Max. load 350 kg (770 lbs.).

LikoScale 350 is certified according to the european directive NAWI 90/384 (Non Automatic Weighing Instruments).

Contact Liko for more information.

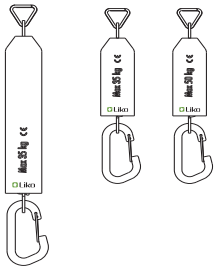


Support Springs

Elastic springs enable a gentler springing motion, which makes activities such as gait training easier and more natural. Springs are available in three different designs:

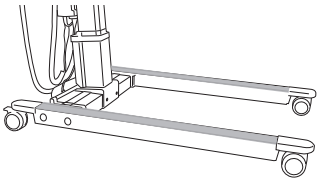
Long, max. 70 kg (154 lbs.)/pair	Prod. No. 3166511
Short, max. 70 kg (154 lbs.)/pair	Prod. No. 3166512
Short, max. 100 kg (220 lbs.)/pair	Prod. No. 3156513.

For more information, see instruction guide for Liko MasterVest, mod. 60, 64, or Liko Lift Pants, mod. 92.

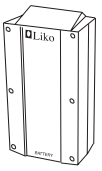


Leg Protector

Leg Protector Set Golvo 7000, grey	Prod. No. 2006011G
Leg Protector Set Golvo 7000, black	Prod. No. 2006011
Leg Protector Set Golvo 7007, grey	Prod. No. 2006012G
Leg Protector Set Golvo 7007, black	Prod. No. 2006011



Extra Battery Box Prod. No. 2006106



Charger for Extra Battery Prod. No. 2004106

for wall mounting or for use with Table Charger Housing

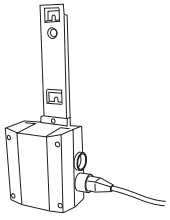
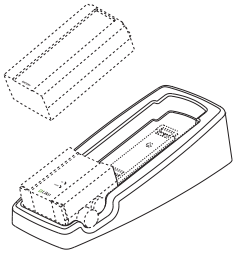


Table Charger Housing Prod. No. 2107103
excl. battery box and charger

a table charger housing for the charger when you do not wish to mount the charger on the wall.



Simple Troubleshooting

The lift does not work up/down.
Base-width adjustment does not work.

1. Check that the emergency stop button is not pushed in (page 8).
2. Check that the cables to the control box are correctly connected (page 6).
3. Check that the charger cable is not connected to the power socket.
4. Check that the battery is charged (page 11).
5. Check that the contact plates of the battery are not defective or broken off.
6. *If the lift still does not work satisfactory contact Liko.*

Battery charging does not work.

1. Check that the emergency stop button is not pushed in (page 8).
2. Check to ensure that the power socket is power-supplied.
3. Check that the charger cable is correctly connected (pages 6 & 11).
4. Check that the contact plates of the battery are not defective or broken off.
5. *If the lift still does not work satisfactory contact Liko.*

The lift stops in the elevated position.

1. Check that the emergency stop button is not pushed in (page 8).
2. Use the electrical emergency lowering to safely lower the patient (see page 8).
3. Use the mechanical emergency lowering to safely lower the patient (page 8).
4. Check that the battery is charged (page 11).
5. *If the lift still does not work satisfactory contact Liko.*

The lift does not reach its maximum lifting height.

1. Check that the correct lifting range has been set (page 9).
2. *If the lift still does not work satisfactory contact Liko.*

If you hear unusual sounds or discover wear and tear on the strap.

Contact Liko.

Care and Maintenance

Care and inspection

For safe and troublefree operation, a few routine procedures should be performed every day the lift is used.

- Visually inspect the lift and check for external damage or wear
- Check the sling bar connector
- Check the lift strap for wear and make sure it is not twisted
- Check that the safety latches work properly
- Test the operation of raising and lowering and the base-width adjustment function
- Check that the correct lifting range has been set and that the emergency lowering works properly
- Charge the battery every day the lift is being used, and check the charger function

When necessary, clean the lift with a moist cloth, using common surface cleaners or disinfectants. **NOTE! Do not use cleaning products that contain phenol or chlorine, since these can eventually damage aluminum and polyamide material.**

△ The lift must not be exposed to running water.

Service

Golvo must be inspected at least once per year. Pay particular attention to parts that are subject to wear.

△ Repairs and maintenance may only be carried out according to Liko service manual, by personnel authorized by Liko and using original Liko spare parts.

Service agreements

Liko invites you to sign a service agreement for regular maintenance and testing of your Liko products. Contact your local Liko representative for more information.

Transportation and storage

During transportation, or when the patient lift is not to be used for some time, the emergency stop button should be pushed in. The environment where the patient lift is transported and stored should have a temperature between 10 ˚C and 40 ˚C and a humidity between 30 % and 75 %. The air pressure should be between 700 and 1060 hPa.

Recycling

For instructions on how your Liko product should be recycled, please visit our website www.liko.com.

Product changes

Liko's products are constantly being updated and refined. Liko reserves the right to change aspects of the products without prior notice. Contact your local Liko representative for updated information and advice.

Design and Quality by Liko in Sweden

Liko is quality certified according to ISO 9001 and its equivalence for the medical device industry, ISO 13485.
Liko is also certified according to environmental standard ISO 14001.

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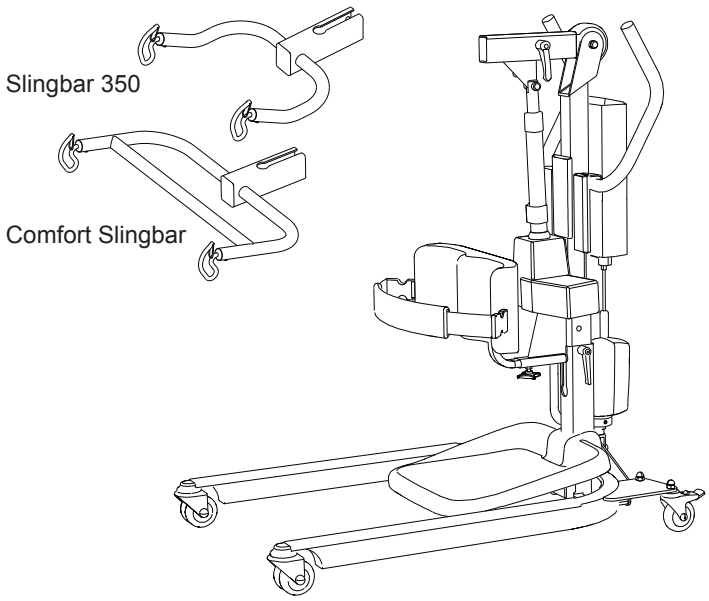
Sabina II

Instruction Guide

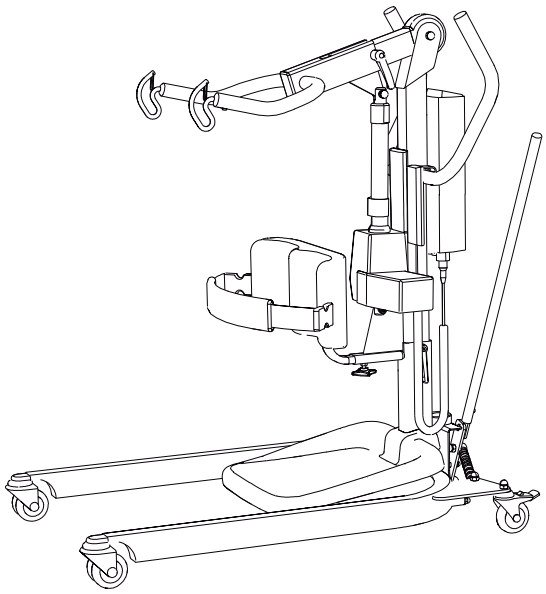
English
7EN155103-01
2008-01-02

Applies to the following models:

Sabina II EE	Prod. No. 2020003
Sabina II EM	Prod. No. 2020004



Sabina II EE



Sabina II EM

Product Description

The Sabina sit-to-stand lift is especially designed for people who have difficulty in standing up on their own from a seated position.

Sabina is intended for use with patients who are able to actively participate in the raising motion. When standing, they can be moved to a wheelchair or to a toilet; this gives them standing practice when moving around.

There are two different slingbar options for Sabina, as well as many different sit-to-stand vests. The patient's overall mobility determines the choice of slingbar and sit-to-stand vest.

The Sabina equipped with the Comfort Slingbar combined with the Liko ComfortVest provides an especially gentle lifting action without putting pressure under the arms. This combination is suitable for those who are especially sensitive to pressure under the arms, such as people who are paralyzed on one side.

For patients with poor balance, we recommend Sabina Side Support, which provides the patient with extra lateral stability during the raising motion, as well as in the standing position.

To a limited extent, Sabina can also be used for passive lifts and transfers with patients sitting in a sling.

In this document, the person being lifted is referred to as the patient, and the person helping is referred to as the caregiver.

⚠ is a warning triangle used for situations that demand extra care and attention.

IMPORTANT!
Read the instruction guide for both the patient lift and lifting accessories before use. Lifting and transferring a person always involves a certain level of risk. It is important to completely understand the contents of the instruction guide. The equipment should only be used by trained personnel. Please contact Liko in the event of any uncertainties or questions.

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Using Sabina to Assist Patients into a Standing Position 10-13
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Care and Maintenance 16

△ NOTE!
This instruction guide contains important information for the user of the product.
All those who use the product should review and completely understand the contents of the instruction guide.
Remember to keep the instruction guide in a place where it is always available to those using the product.

Safety Instructions

Before using, make sure that:
- the lift is assembled in accordance with the assembly instructions
- the lifting equipment is properly attached to the lift
- the batteries have been charged for at least 6 hours
- you have read the instruction guide for the lift and lifting accessories
- personnel using the lift are informed of the correct operation and use of the lift
- the lifting accessories are selected appropriately in terms of type, size, material and design with regard to the patient's needs.

Before lifting <u>always</u> make sure that:
- the lifting accessories are not damaged
- the lifting accessories are correctly and safely applied to the patient in order to avoid bodily injury
- the lifting accessory is correctly applied to the lifting equipment
- the sit-to-stand vest's/sling's straps are properly connected to the slingbar hooks when the straps have been fully extended but before the patient is lifted from the underlying surface.

△ Never leave a patient unattended in Sabina!

Sabina II EM and Sabina II EE have been tested by accredited testing institutes, and comply with the requirements for MDD Class 1 products (MDD 93/43/EEC).

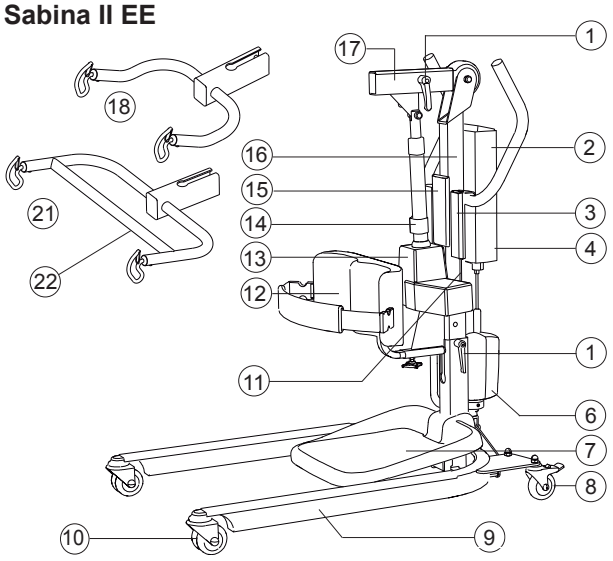
Sabina II EM and Sabina II EE comply with the requirements of IEC 60601-1, IEC 60601-1-2, EN ISO 10535, UL-60601-1 and CAN/CSA C22.2 No.601.1.

Particular care must be taken when using strong sources of potential disturbance, such as diathermy, etc, so that cables are not positioned on or near the lift. If you have questions, please consult the responsible assistive-device technician or the supplier.

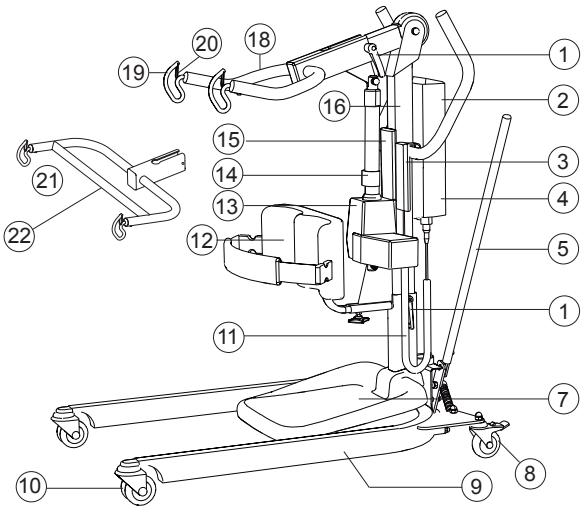
Max. load: 200 kg (440 lbs).

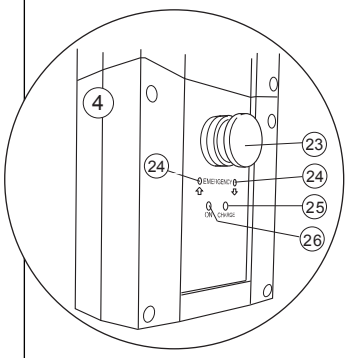
Definitions

Sabina II EE



Sabina II EM





1. Locking handles
2. Battery pack
3. Handcontrol
4. Control box with Emergency Stop
5. Lever for base-width adjustment
6. Motor for base-width adjustment
7. Foot rest (removable)
8. Rear wheels fitted with brake
9. Base
10. Front steering wheel
11. Cable for handcontrol
12. Lower-leg support (adjustable)
13. Motor for lift arm
14. Mechanical emergency lowering
15. Holder for quick reference guide with colour codes for sling sizes
16. Mast
17. Lift arm
18. Slingbar 350
19. Lifting hook
20. Safety latches
21. Comfort Slingbar
22. Cross bars (only Comfort slingbar)
23. Emergency Stop
24. Electrical emergency lowering/ emergency raising
25. Charger indicator lamp (Charge = charging in process)
26. Charger indicator lamp (ON = connected)

Technical Data

Batteries:	2 x 12 V 2.9 Ah. Valve-regulated lead-acid gel-type batteries. New batteries are provided by the supplier.
Motor for lift arm:	24 V, 9.2 A, permanent magnetic motor with mechanical safety mechanism and safety nut.
Motor Base:	24 V, 5 A, permanent magnetic motor.
Wheels:	Standard front: 75 mm / 3 inch. twin wheel. Standard back: 75 mm / 3 inch. individual wheels fitted with brakes.
Battery charger:	Built-in charger for 100-240 VAC, 50-60 Hz, max 400 mA.
Material:	Powder-painted steel.
Emergency lowering:	Mechanical and electrical.
Foot rest:	Removable.
Lower-leg support:	Adjustable in terms of height and depth. Removable.
Intermittent power:	Int. Op 10/90, active operation max 2 min. Only 10% of a given length of time may be active, yet no more than 2 min.
Protection class:	IP 43

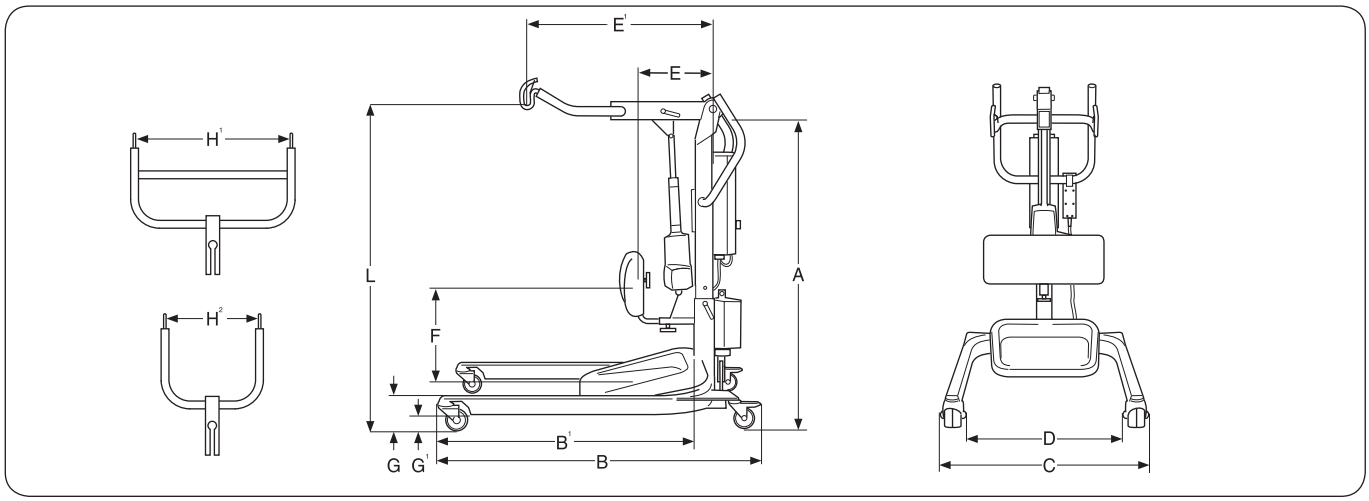
The device is intended for use indoors.

Type B, in accordance with the electrical shock protection class.

Class II equipment.

Measurements

Sabina II EE



Max. load and weight in kg. Measurements in cm.

Slingbar alternatives	Max. load*	L** Max.	L** Min.	A** Max.	A** Min.	B	B¹	C	D	E	E¹ (max)	F	G***	G¹***	H¹	H²	Weight Total	Weight Part	Turning diameter
Comfort Slingbar	200	160	80	110	100	106	86	69-110	53-97	26-34	61	30-40	11/16	5/9	60	35	45,2	22,7	118
Slingbar 350	200	172	80	110	100	106	86	69-110	53-97	26-34	65	30-40	11/16	5/9	60	35	45,2	22,7	118

Max. load and weight in lbs. Measurement in inch.

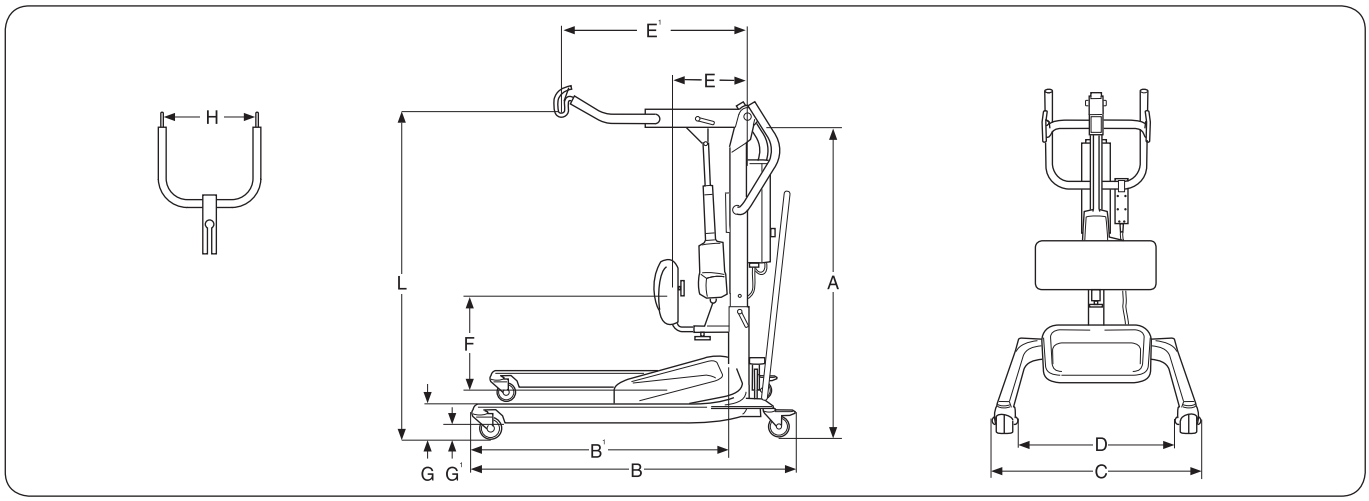
Slingbar alternatives	Max. load*	L** Max.	L** Min.	A** Max.	A** Min.	B	B¹	C	D	E	E¹ (max)	F	G***	G¹***	H¹	H²	Weight Total	Weight Part	Turning diameter
Comfort Slingbar	440	63	31.5	43.3	39.4	41.7	33.9	27.2-43.3	21-38.2	10.2-13.4	24	11.8-15.7	4.3/6.3	2/3.5	23.6	13.8	99.6	50	46.5
Slingbar 350	440	67.7	31.5	43.3	39.4	41.7	33.9	27.2-43.3	21-38.2	10.2-13.4	25.6	11.8-15.7	4.3/6.3	2/3.5	23.6	13.8	99.6	50	46.5

* The maximum load for passive lifting is 150 kg / 330 lbs.

** Dimensions vary based on assembly options. See ”Assembly ”, page 5.

*** The first dimension applies when using standard wheels (75 mm / 3 inch. wheel diameter).
The second dimension applies when using large wheels (100 mm / 3.9 inch. wheel diameter).

Sabina II EM



Max. load and weight in kg. Measurements in cm.

Slingbar alternatives	Max. load*	L** Max.	L** Min.	A** Max.	A** Min.	B	B¹	C	D	E	E¹ (max)	F	G***	G¹***	H	Weight Total	Weight Part	Turning diameter
Slingbar 350	200	172	80	110	100	106	86	69-110	53-97	26-34	65	30-40	11/16	5/9	35	44,8	22,7	118

Max. load and weight in lbs. Measurement in inch.

Slingbar alternatives	Max. load*	L** Max.	L** Min.	A** Max.	A** Min.	B	B¹	C	D	E	E¹ (max)	F	G***	G¹***	H	Weight Total	Weight Part	Turning diameter
Slingbar 350	440	67.7	31.5	43.3	39.4	41.7	33.9	27.2-43.3	21-38.2	10.2-13.4	25.6	11.8-15.7	4.3/6.3	2/3.5	13.8	98.8	50	46.5

* The maximum load for passive lifting is 150 kg / 330 lbs.

** Dimensions vary based on assembly options. See ”Assembly ”, page 5.

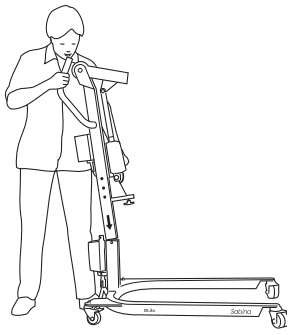
*** The first dimension applies when using standard wheels (75 mm / 3 inch. wheel diameter).
The second dimension applies when using large wheels (100 mm / 3.9 inch. wheel diameter).

Assembly

Before assembly, make sure you have the following parts:

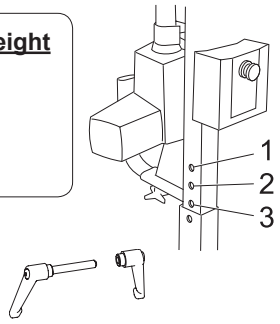
- Lift mast with lift arm, control box, motor for lift arm
- Slingbar with safety latches and locking handles
- Handcontrol with cable
- Battery pack incl. holder for the charging cable
- Base with locking handles (incl. motor for base-width adjustment on Sabina II EE)
- Lever for base-width adjustment (only Sabina II EM)
- Foot rest and frame for the foot rest
- Lower-leg support
- Bag containing instruction guide, charger connector cable, extension cord and quick reference guide.

NOTE! Sabina II EM is always supplied with Slingbar 350. For Sabina II EE, the slingbar is supplied separately, either as Slingbar 350 or the Comfort Slingbar. We show the Sabina with Comfort Slingbar in this description.



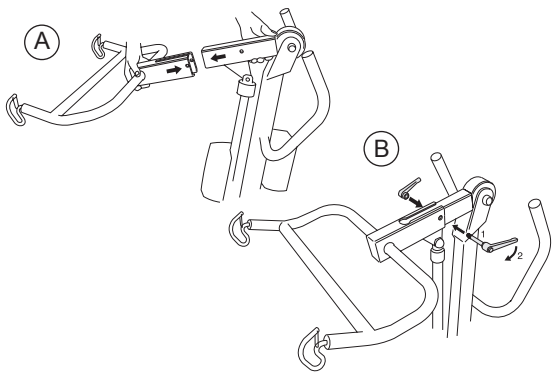
Individual adjustment of lifting height

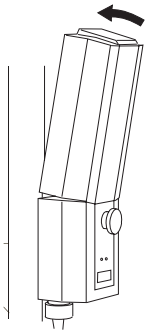
Patient's height	Position
< 170 cm / 67 inch.	1
160-190 cm / 63-74.8 inch.	2
> 180 cm / 70.9 inch.	3

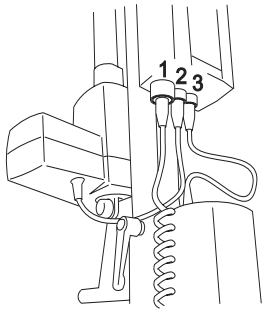


1. Remove the locking handle from the base. Place the lift mast in the foot of the base.

2. When the lift mast is secured in the base, the lifting height may be adjusted to three different levels. Choose one of the three holes. The choice of setting depends on the height of the patient (see illustration above). The distance between holes is 5 cm / 2 inch. See "Measurements" on page 4. Use the included locking handle to secure the lift mast to the base.





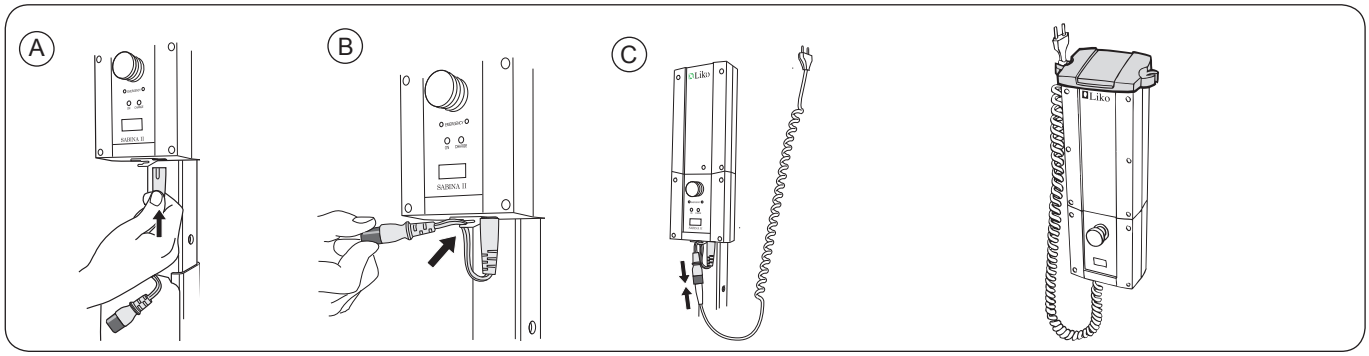


3. A) Remove the locking handle from the lift arm. Slide the slingbar onto the lift arm with the opening on the hooks facing upward. (see illustration).

   B) Attach the locking handle and pull it tight.

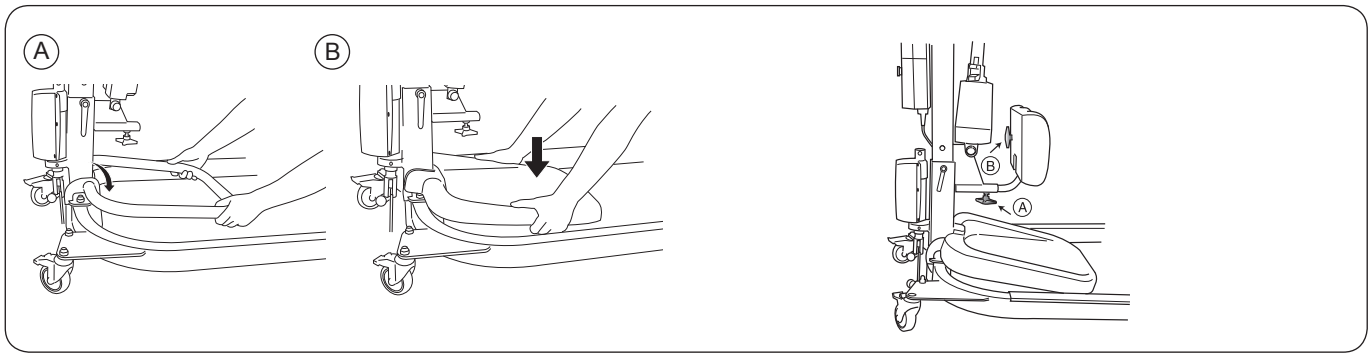
4. Place the battery pack in its bracket above the control box. Make sure that the battery pack is secured (you will hear a clicking sound).

5. Connect the cables as follows:
   - Cable handcontrol to socket 1.
   - Cable from the motor for lift arm to socket 2.
   - Cable motor for base-width adjustment to outlet 3 (only Sabina II EE).



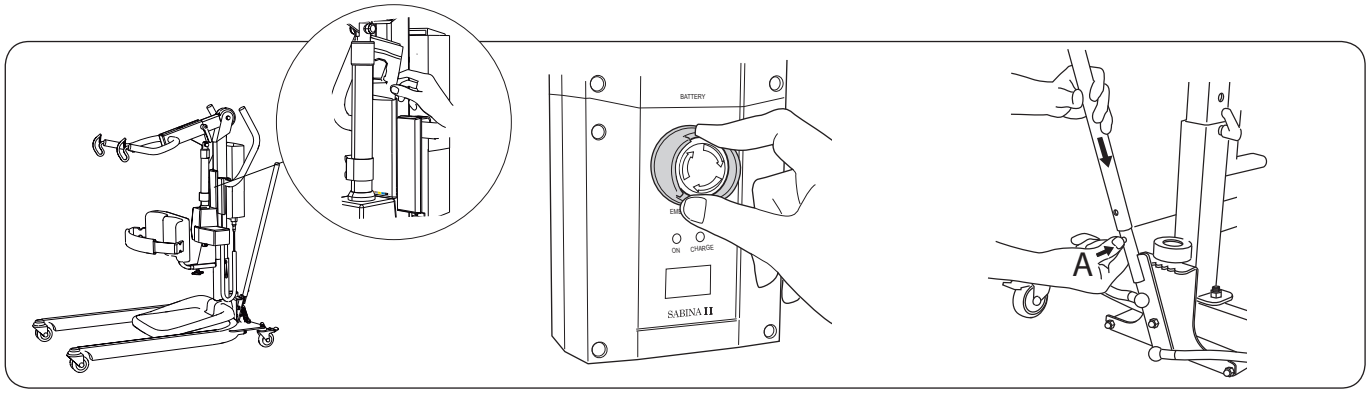
6. A) Plug the charger connector cable into the socket under the control box.
   B) Attach the charger connector cable to the strain relief system.
   C) Plug the charger cable into the charger connector cable.

7. Mount the holder for the charging cable: Seize hold of the front edge of the battery pack and push down on the back until you hear a clicking sound.



8. A) Clip the frame for the foot rest over the lift mast's bracket to the base. Make sure the frame is securely in place.
   B) Push the footrest into the frame.

9. Slide the lower-leg support's bracket into the lift mast's bracket for the lower-leg support. Wheel A is used to adjust the depth, i.e. the distance to the patient's shins. Wheel B is used to adjust the lower-leg support's height setting. Carefully tighten the wheels after adjustment.



10. Place the quick reference guide in the holder on the mast.

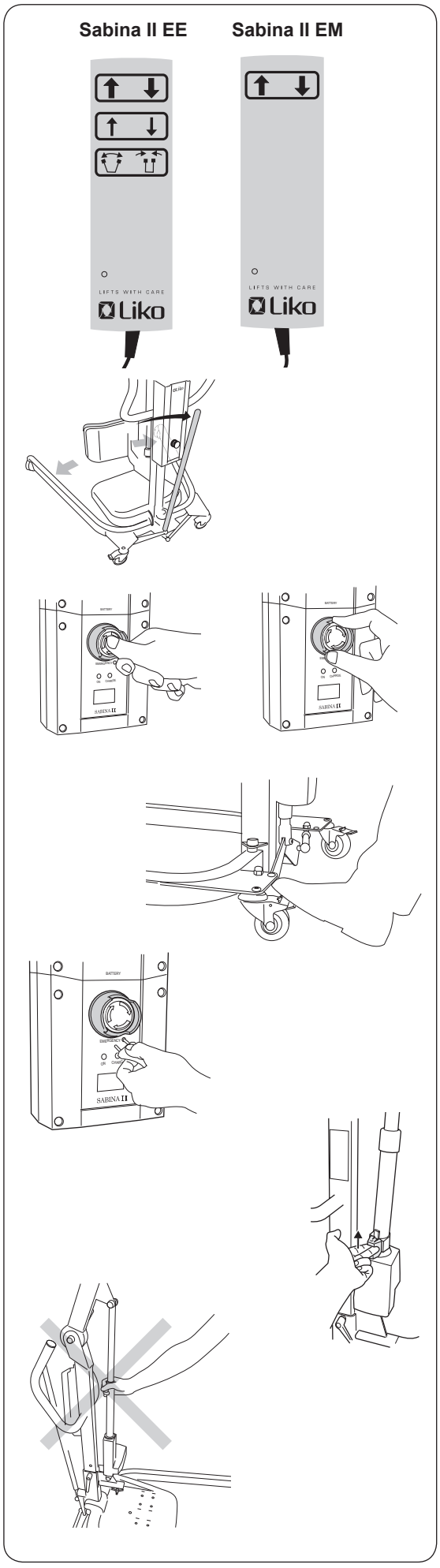
11. Release the Emergency Stop by turning the button in the direction indicated by the arrows on the button.

12. Mount the lever for base-width adjustment (only Sabina II EM):
   - Push in the locking bolt by the base of the lift using your finger (A).
   - Move the lever into place.
   - Turn the lever until it locks into place in the bracket on the lift's base. You will hear a clicking sound.

After assembly, make sure that:

- the motion of the lift arm corresponds to the buttons on the handcontrol
- the emergency lowering device works (mechanically and electrically)
- the base-width adjustment works
- the wheels' brakes work
- the indicator lamps on the front of the control box illuminate during charging.

Operation



Maneuvering
Sabina is maneuvered using push-buttons on the handcontrol.
When raising and lowering the lift arm:
Press ⬆ respectively ⬇.
The direction in which the arrows are pointing applies when the handcontrol is held as shown in the picture.
The thicker sets of arrows refer to the maximum lifting speed. The thinner arrows refer to the lower lifting speed. The lifting motion ends as soon as the push button is released.
For base-width adjustment (only Sabina II EE):
press the appropriate button

Base-width adjustment

Narrowing the base.

Base-width adjustment on Sabina II EM
Widening or narrowing the base is performed manually using a hand lever that can be placed in a variety of positions. Push the lever back to unlock it, and push it to either side to adjust the width. When the lever is released, the position is locked.

To activate the Emergency Stop:
Press the red button on the control box.
To reset the Emergency Stop:
Turn the button in the direction shown by the arrows until the button screws out.

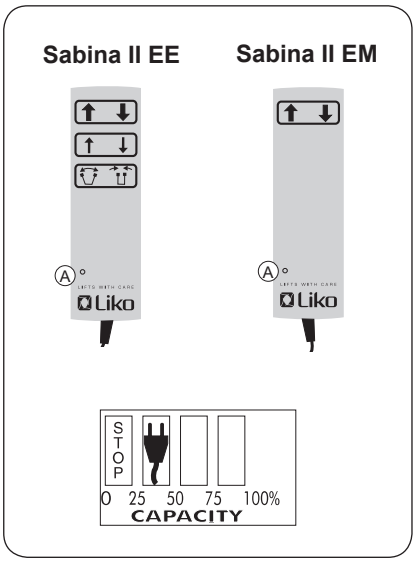
Locking the wheels
The rear wheels can be locked for rotation and lateral movement.
To lock the wheels, use the foot to engage the locking pedal.
To unlock the wheels, press the raised button by the wheel.
During passive/active lifting of patients, the wheels should be unlocked so that the lift can be moved to the patient's center of gravity.

Electrical emergency lowering / emergency raising
Use a narrow object to push the buttons inside the labeled holes on the control box.
△ The object used to press must not be sharp, since this may cause damage on the control box!

Mechanical emergency lowering
Pull the red emergency lowering regulator straight up.
Mechanical emergency lowering only works when the lift arm is under load, i.e. when a patient is standing/sitting in the lift.
The lowering motion is slightly delayed.

△ Never move the lift by pulling on the actuator!

Charging the Batteries



Battery Capacity

In the event of low battery voltage, a signal from the control box will sound. At the same time, an indicator (A) on the handcontrol will illuminate. When this happens the battery must be charged as soon as possible. However, there is sufficient power for a few more lifts.

There is a display on the control box indicating current battery capacity. When all fields are black, the battery is fully charged. When a plug is displayed (see illustration) the battery must be re-charged as soon as possible.

In order to ensure maximum battery life, it is important to charge the batteries regularly. We recommend that you charge the batteries after use or every night.

Maximum charge is achieved after approximately 6 hours. When the batteries are fully charged, the charger will disconnect automatically.

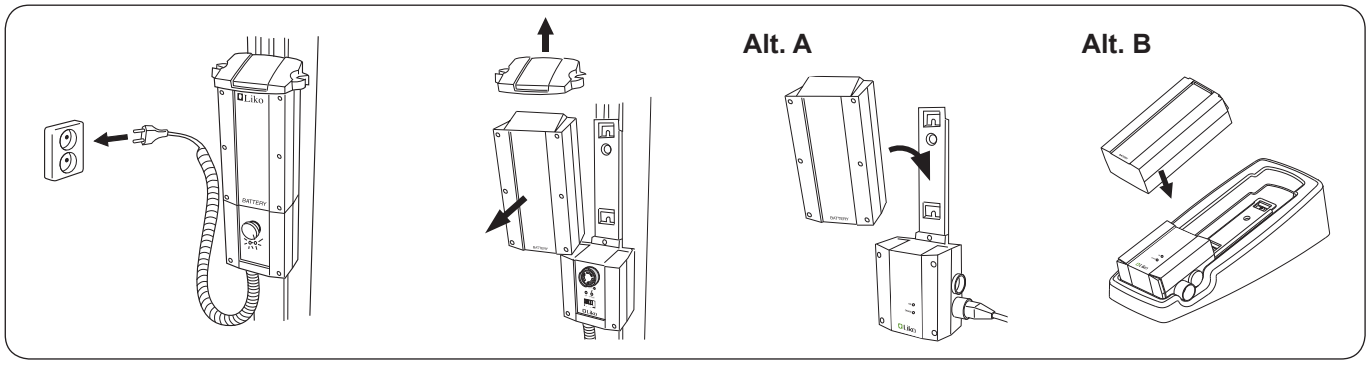
NOTE! When charging, a yellow indicator lamp on the control box will illuminate. The yellow lamp turns off when the batteries are fully charged.

If the lamp has not turned off after 8 hours of charging, the batteries probably need to be replaced. Stop charging and replace the batteries.

Never charge batteries in a wet area.

If the lift is not used every day, we recommend that the lift is connected to a charger, or that the Emergency Stop is engaged in order to break the supply of power and conserve battery life. Make sure the battery is completely charged before the Emergency Stop is engaged.

Alternative charging procedures



With built-in charger:

Connect the charger cable to a wall socket (100-240 VAC). Make sure that both indicator lamps on the control box are illuminated. The yellow lamp indicates that charging is taking place, while a green lamp indicates that power is being supplied to the charger.

If the charger cable is beginning to stretch, it should be replaced in order to minimize the risk of the cable getting stuck and breaking.

With a wall-mounted charger or a table charger housing:

Detach the holder for the charger cable. Remove the battery pack from the control-box by releasing the blocking bolt at the top of the battery pack.

Alt. A. Place the battery pack on the wall-mounted charger. Plug the charger into a wall socket (100-240 VAC). Make sure that both indicator lamps on the charger are illuminated. The yellow lamp indicates that charging is taking place, while a green lamp indicates that power is being supplied to the charger.

Alt. B. Place the battery pack on the charger in the table charger housing. Plug the charger into a wall socket (100-240 VAC). Make sure that both indicator lamps on the charger are illuminated. The yellow lamp indicates that charging is taking place, while a green lamp indicates that power is being supplied to the charger.

NOTE! The lift cannot be used when the charger cable is plugged into a wall socket.

Pb

Old batteries are to be left at the nearest recycling station or given to personnel authorized by Liko.

Max. load

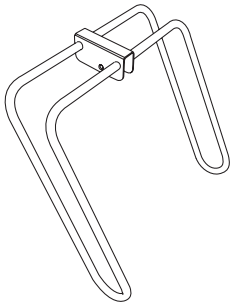
Different maximum loads may apply to different products in the assembled lift system: lift, slingbar, sit-to-stand vest/sling and any other accessories used. For the assembled lift system the maximum load is always the lowest maximum load rating of any of the products included in the lift system.
Study marking on the lift and lifting accessories or contact your Liko representative if you have any questions.

Recommended Lifting Accessories

The below is a general description of the recommended accessories for Sabina II sit-to-stand lift.
To select an appropriate sit-to-stand vest or sling, see e.g. the brochure ”Lifting Accessories.”
Also review the instruction guide for the respective sling model or lifting accessory for further guidance.
Contact your Liko representative or visit www.liko.com for advice and information on Liko’s product range.

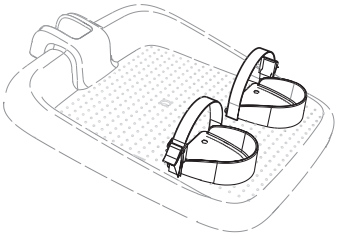
Sabina Side Support Prod. No. 2027100-1

Sabina Side Support is an accessory for patients with compromised lateral stability.
Prod. No. 2027101: can be used with Sabina II with a split lift arm (ser. no. ≥ 402794).
Prod. No. 2027100: can be used with earlier Sabina models with a fixed (not split) lift arm (ser. no. ≤ 402793).

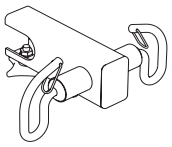


Sabina Heel Support Prod. No. 2027011

Heel supports are used if the patient’s feet need to be fixed to the foot rest. Foot straps are included.
△ Be aware of any decreased mobility and/or the risk of hyperextension of the knee joints when using Heel Support Sabina.



Seatstrap Slingbar
Prod. No. 2027007: can be used with Sabina II.
Prod. No. 2027006: can be used with earlier Sabina models, but can also be used with Sabina II.

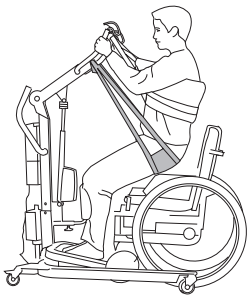


Prod. No. 2027007

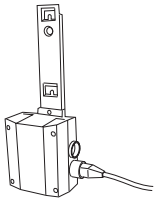
Prod. No. 2027006

Sabina Seatstrap Prod. No. 3591115

Seatstrap is an accessory that makes the first part of the raising motion easier. The Seatstrap is connected to a Seatstrap Slingbar which helps the user move the seat up when raising. In standing position, the Seatstrap can easily be disconnected so that it is not in the way when e.g. going to the toilet.



Battery charger, wall-mounted
or for use with a table charger housing
Prod. No. 2004106



Extra battery
Prod. No. 2006106

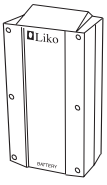
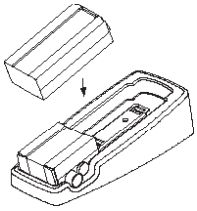


Table charger housing
excl. charger and battery
Prod. No. 2107103

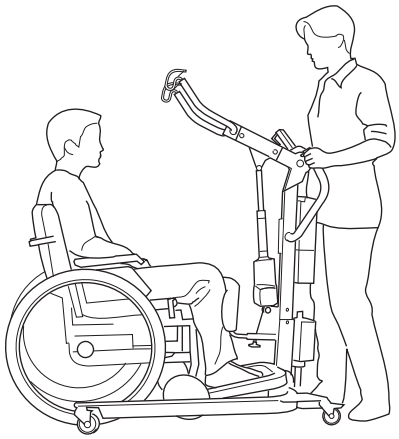


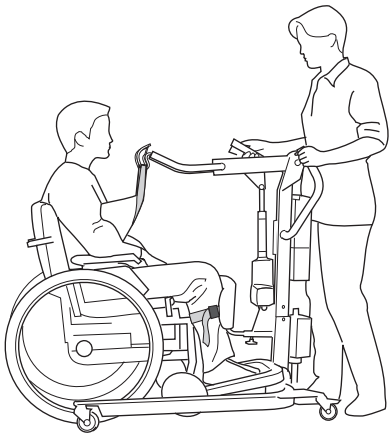
Using Sabina to Assist Users into a Standing Position

There are two different slingbars available for Sabina, as well as many different sit-to-stand vests. The patient's overall mobility determines which slingbar and SupportVest to use. Carefully study the instruction guide for the lifting accessories used. Before using Sabina, it is important to make a custom adjustment to the lifting height. See page 5.

Raising a person with active lifting using Sabina with Slingbar 350

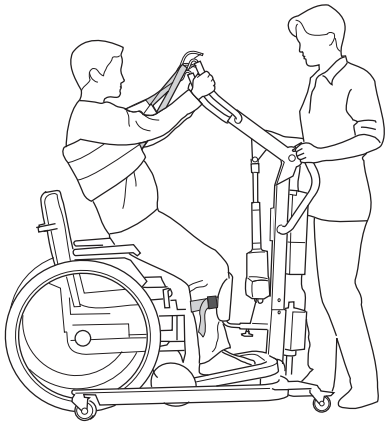
Recommended for use with this slingbar is Liko Support Vest mod. 91, or Liko SafetyVest mod. 93, 94.
When using Slingbar 350, the patient's arms are outside the sling. Slingbar 350 combined with SafetyVest mod. 93, 94 gives the patient extra support while being helped into a standing position.
Below is a description of how to use SupportVest mod. 91.
See the instruction guide for the appropriate sit-to-stand vest for more information.

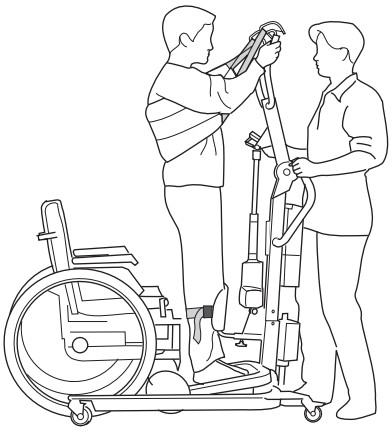




1. Place Sabina in front of the patient.
   Adjust the width of the base. Place the feet in the middle of the foot rest with the shins parallel to the lower-leg support. Adjust the height and depth of the lower-leg support as needed for comfortable support below the kneecap.

2. Place the sit-to-stand vest around the patient in accordance with the vest's instruction guide. Connect the sit-to-stand vest's straps to the hooks in the slingbar. Tighten the calf strap.





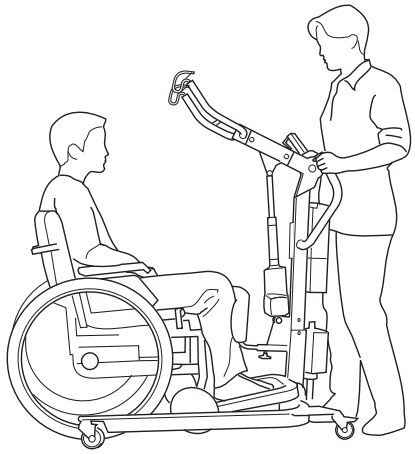
3. Raise the slingbar about 10–20 cm / 3.9-7.9 inch. The patient grabs the slingbar. Continue the lifting procedure. If the patient leans back during the lift, the lifting will be made easier, preventing the vest from sliding up. The height to which the lift should proceed varies from person to person.
   △ Before the patient is lifted from the underlying surface, but after the straps have been fully extended, make sure the straps are properly connected to the slingbar.

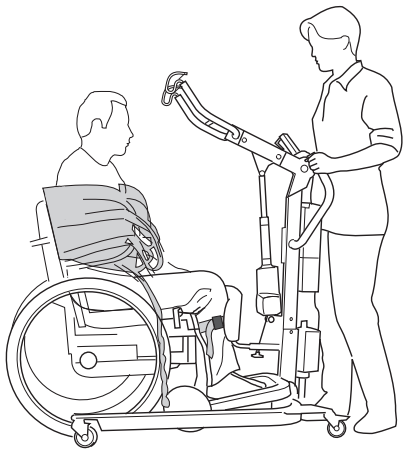
4. For a more upright position, continue the lifting motion to the topmost position. The raising motion may feel uncomfortable to someone not used to it. Remember that Sabina II EE has two different speeds.

   For maximum comfort, the lift mast should be affixed to the base in the best possible of the three fastening holes. See page 5.

Lifting a person using active lifting with Sabina with the Comfort Slingbar

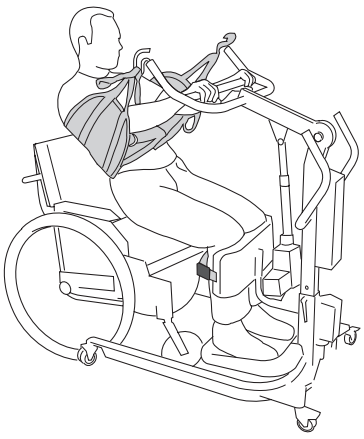
For this slingbar, we recommend Liko ComfortVest mod. 95. This combination is suitable for people who are especially sensitive to pressure under the arms, such as people who are paralyzed on one side. The ComfortVest is designed to lift behind the back and on the outside of the arms. The Comfort Slingbar can also, to a limited extent, be used with Liko SafetyVest mod. 93 and 94, especially for larger patients. Below is a description of how to use ComfortVest mod. 95. See the instruction guide for the appropriate sit-to-stand vest for more information.

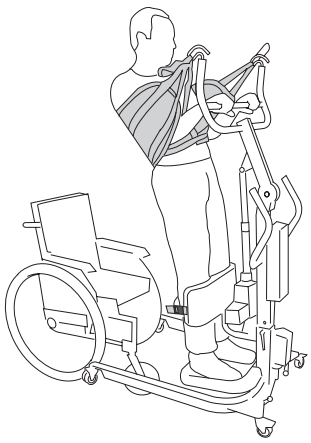




1. Place Sabina in front of the patient.
   Adjust the base width. Place the feet in the middle of the foot rest with the shins parallel to the lower-leg support. Adjust the height and depth of the lower-leg support as needed for comfortable support below the kneecap.

2. Place the ComfortVest around the patient in accordance with the vest's instruction guide. Connect the support vest's straps to the hooks in the slingbar. Tighten the calf strap.





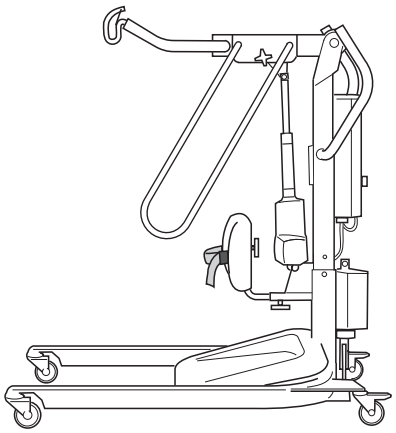
3. Raise the slingbar about 10–20 cm / 3.9-7.9 inch. The patient grabs the slingbar. Continue the lifting procedure. If the patient leans back during the lift, the lifting will be made easier, preventing the vest from sliding up. The height to which the lift should proceed varies from person to person.
   △ Before the patient is lifted from the underlying surface, but after the straps have been fully extended, make sure the straps are properly connected to the slingbar.

4. For a more upright position, continue the lifting motion to the topmost position. The raising motion may feel uncomfortable to someone not used to it. Remember that Sabina II EE has two different speeds. For maximum comfort, the lift mast should be affixed to the base in the best possible of the three fastening holes. See page 5.

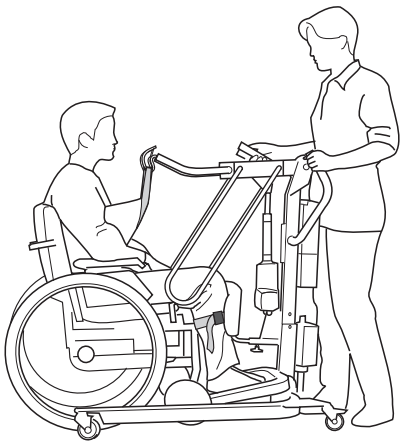
Lifting a person using active lifting in Sabina with Sabina Side Support.

Sabina Side Support is an accessory intended for use by patients with diminished lateral balance.
See ”Recommended Lifting Accessories,” page 9. There are two different slingbar options for Sabina Side Support, and a variety of sit-to-stand vests. The patient’s overall mobility determines the choice of slingbar and sit-to-stand vest. Please carefully study the instruction guide for the accessories to be used. The below describes how to use SupportVest mod. 91 with Slingbar 350.

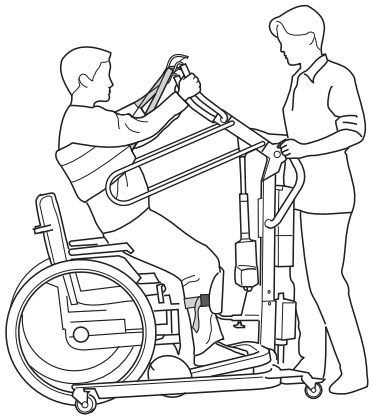
Follow the instructions on page 11. This section includes supplementary information.



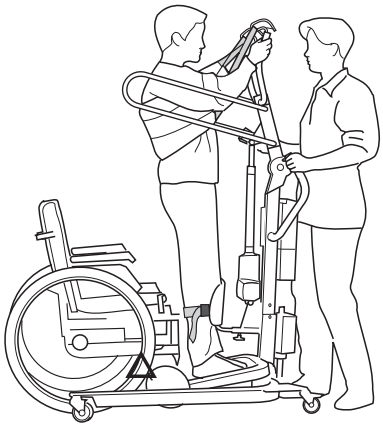
1. Mount the Side Support onto Sabina in accordance with the Side Support’s assembly instructions.



2. Place the SupportVest around the patient in accordance with the vest’s instruction guide. Connect the vest’s straps to the hooks in the slingbar. Tighten the calf strap.



3. Raise the slingbar about 10–20 cm / 3.9-7.9 inch. The patient grabs the slingbar. Continue the lifting procedure. If the patient leans back during the lift, the lifting will be made easier, preventing the vest from sliding up. The Side Support provides good support in the half-standing position and prevents lateral motion.
   △ **Before the patient is lifted from the underlying surface, but after the straps have been fully extended, make sure the straps are properly connected to the slingbar.**



4. Continue the raising motion to the height desired. The Side Support provides good support in the standing position.

Problems while helping a patient get to his feet

The patient does not reach a sufficiently upright position—what is to be done?
Sometimes this is due to the patient's state of health or mobility: Weakened musculature, lack of strength and/or diminished mobility in hip or knee joints. In order to get the best possible use out of Sabina, there are some things to keep in mind:

1 Connect the hook into the vest using the shorter strap (B).

2 Raise the lift mast's fastening (bracket) in Sabina's base.
See adjustment of lifting height on page 5.

3 Try a smaller vest size. A smaller vest means a shorter distance to the hooks and a more upright standing position.

The patient has a hard time participating in the first part of the raising motion —what is to be done?
Sabina Seatstrap is an accessory meant for patients who need extra help with raising the seat during the first part of the raising motion. For more information, see "Recommended Lifting Accessories," page 9, or read the instruction guide for Sabina Seatstrap.

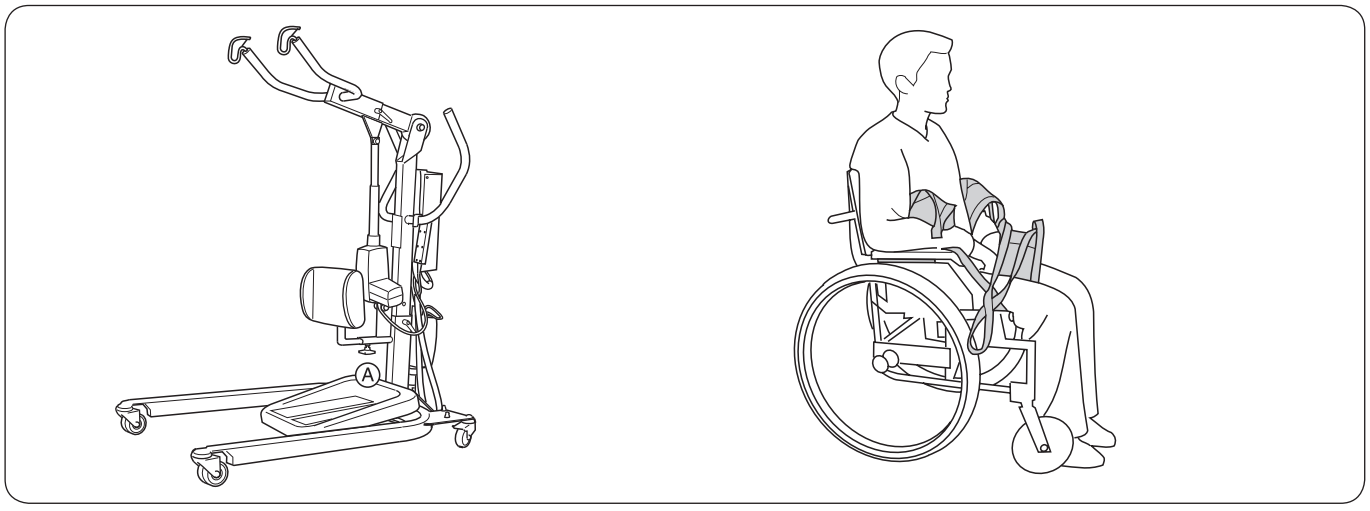
Using Sabina in Passive Lifting Situations

For passive lifting, we recommend a sling model that does not restrict the lifting height too much. Adjustment on a case by case basis is always important to functionality and security. The patient's overall mobility and health determine the choice of sling model and slingbar.
Be aware that the maximum load for passive lifting is reduced from 200 kg/440 lbs to 150 kg/330 lbs; this is due to the fact that during passive lifting, the foot rest does not bear any of the load.

Sabina with Slingbar 350 (bar width 350 mm/13.8 inch.)
For this slingbar, we recommend Liko Original Sling mod. 10 and 11, Liko Lift Pants mod. 40, 41, 45 and 46, as well as the Liko Lift Strap.

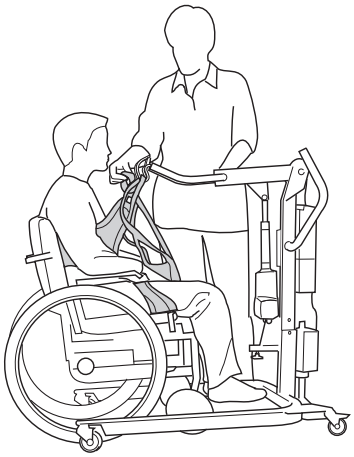
Sabina with Comfort Slingbar (bar width 600 mm/23.6 inch.)
For this slingbar, we recommend Liko Universal Sling mod. 00 and 02, as well as Liko Original Sling mod. 10 and 11. See the respective instruction guide for the sling model for more information or contact Liko for further guidance.

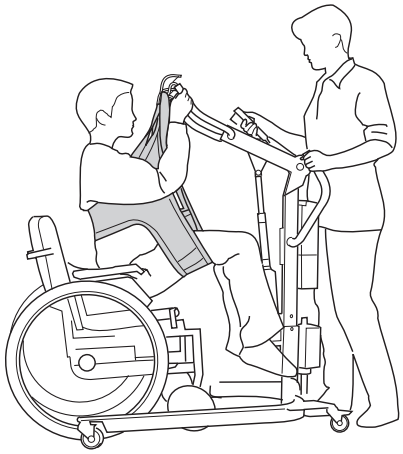
Passive lifting using Sabina with Slingbar 350



1. Disassemble the lower-leg support: Unscrew screw A. Pull out the lower-leg support.
   Disassemble the foot rest: Pull off the foot rest. Grab the front edge of the frame. Fold it up and lift it off the base.

2. Apply an appropriate sling to the patient, see above.
   Follow the sling's instruction guide.
   This shows Liko Lift Pants mod. 40.





3. Pull up the lift. Connect the straps into the slingbar hooks. The lift mast's height setting may have to be adjusted. See page 5.
   △ Before the patient is lifted from the underlying surface, but after the straps have been fully extended, make sure the straps are properly connected to the slingbar.

4. Raise the slingbar to the lowest height needed to complete the transfer.
   △ Make sure that the lifting motion is not so high that the patient gets too near the lift mast!

△ NOTE!
Lifting seated persons with Sabina cannot replace lifting procedures for sitting persons using traditional mobile lifts, e.g. using Viking, Uno, Golvo or LikoLight. The function is intended as a temporary solution when the patient cannot manage an active raising motion using Sabina. If the need for passive lifting persists, we recommend that you switch to one of the lifts mentioned above.

Simple Troubleshooting

The lift does not go up/down. Base width adjustment does not work (in/out).

1. Make sure that the Emergency Stop has not been engaged (page 7).
2. Make sure that the cables to the control box are connected correctly (page 5).
3. Make sure that the charging cable is not connected to a wall socket.
4. Check the battery voltage (page 8).
5. Make sure that the battery pack's contact plates are not defective or broken.
6. *If the lift still does not work satisfactorily, please contact Liko.*

The charger doesn't work.

1. Make sure that the Emergency Stop has not been engaged (page 7).
2. Make sure that the battery packs contact plates are not defective or broken.
3. *If the lift still does not work satisfactorily, please contact Liko.*

The lift is stuck in the high position.

1. Make sure that the Emergency Stop has not been engaged (page 7).
2. Use the selected electrical emergency lowering device to lower the patient onto a firm surface (page 7).
3. Use the selected mechanical emergency lowering device to lower the patient onto a firm surface (page 7).
4. Check the battery voltage (page 8).
5. *If the problem remains, please contact Liko.*

If any odd noises are heard.

Contact Liko.

Care and Maintenance

Care and inspection
For trouble-free use, certain details should be checked each day the lift is used:

- Inspect the lift and check to make sure that there is no external damage.
- Check the functionality of the locking handles.
- Check the functionality of the safety latches.
- Check the integrity of the lifting motion and the base-width adjustment.
- Check to make sure that the emergency lowering (both electrical and mechanical) works.
- Charge the batteries each day the lift is used and make sure the charger works.

When necessary, clean the lift with a moist cloth, using common surface cleaners or disinfectants and check to ensure that the wheels are free of dirt and hair. **NOTE! Do not use cleaning agents that contain phenol or chlorine, since these can damage the polyamide material.**

△ The lift should not be exposed to running water.

Service

Sabina should be inspected for wear at least once a year.

△ Repairs and maintenance may only be carried out according to Liko service manual, by personnel authorized by Liko and using original Liko spare parts.

Service Agreement
Liko invites you to sign a service agreement for regular maintenance and testing of your Liko product.

Transport and Storage
During transportation, or when the patient lift is not to be used for some time, the emergency stop button should be pushed in. The environment where the patient lift is transported and stored should have a temperature between 10 ˚C and 40 ˚C and a humidity between 30 % and 75 %. The air pressure should be between 700 and 1060 hPa.

Recycling
For instructions on how your Liko product should be recycled, please visit our website www.liko.com.

Product changes
Liko's products are constantly being updated and refined. Liko reserves the right to change aspects of the products without prior notice. Contact your local Liko representative for updated information and advice.

Made in Sweden

Liko is quality certified according to ISO 9001 and its equivalence for the medical device industry, ISO 13485.
Liko is also certified according to environmental standard ISO 14001.

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LIFTS WITH CARE

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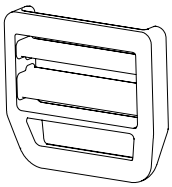
Guide to Liko's Quick-release Hook system

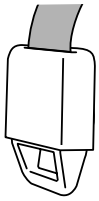
Doc. No. 7EN160163-04
replaces 7EN160163-03
2007-06-05

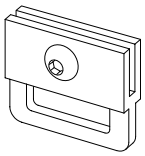


31590005 Q-link

Standard on:
Likorall 242 S/ES R2R (from serial No. 422366)
Multirall (from serial No. 6500436)
Multirall Extension belt
Room to room strap (Multirall)
Carriage, adjustable (Likorall)

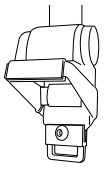
Fits with:
Multirall
Likorall R2R
Golvo
Likorall 243 ES
Likorall 250 ES

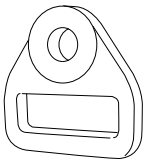




3156505 Adapter 22 for Quick-release Hook

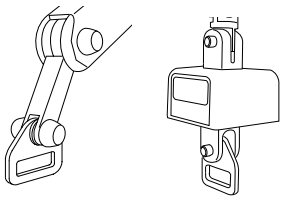
Intended for:
Likorall - all models, except for R2R, 243 ES, 250 ES
Liko Masterlift - models after 1989

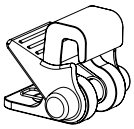




3156509 Q-link 13

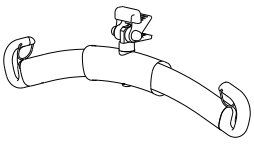
Intended for:
Uno 102 from serial No. 31825
Uno 100
Viking 300, XL, L, M, S
LikoScale 200
LikoScale 350





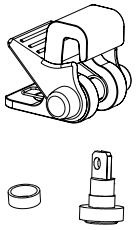
3156508 Quick-release Hook Universal

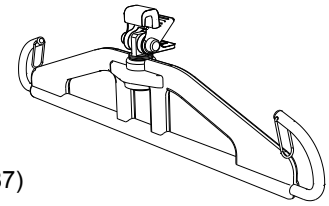
Intended for:
3156074 Universal Slingbar 350 (standard on Prod. No. 3156084)
3156075 Universal Slingbar 450 (standard on Prod. No. 3156085)
3156076 Universal Slingbar 600 (standard on Prod. No. 3156086)
3156200 Stretch Leveller



3156502 Quick-release Hook TDM

Intended for:
3156001 Slingbar Standard 450 (standard on Prod. No. 3156016)
3156002 Slingbar Slim 350 (standard on Prod. No. 3156015)
3156005 Slingbar Mini 220
3156012 Slingbar Wide 670 (standard on Prod. No. 3156017)
3156010 Sling Cross-bar
3156021 Sling Cross-bar 450 (standard on Prod. No. 3156022)
3156018 Sling Cross-bar 670 (standard on Prod. No. 3156019)
3156077 Universal Twinbar 670 (standard on Prod. No. 3156087)
315603x LikoStretch Mod 1800 - all models
315604x LikoStretch Mod 300 - all models
315606x LikoStretch Mod 600 IC - all models
315605x OctoStretch - all models
3156057 FlexoStretch
3156025 Bathing Chair





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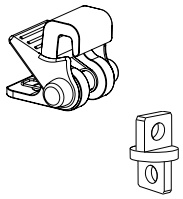


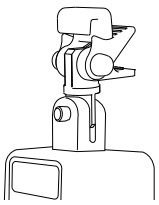
3156508 **Quick-release Hook Universal with:**

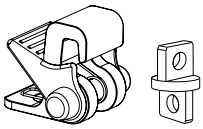
2016502 Adapter 8 mm

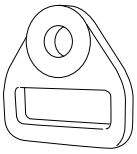
Intended for:

315622x LikoScale - all models

3156227 Scale 300







3156232 **Adapter kit LikoScale**

Consists of:

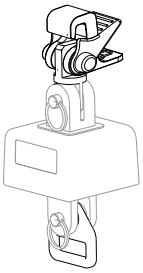
Quick-release Hook Universal

Adapter 8 mm

Q-link 13

Intended for:

315622x LikoScale - all models



3156503 **Quick-release Hook for Slingbar Standard 450**

Intended for:

3156002 Slingbar Slim 350

3156005 Slingbar Mini 220

3156012 Slingbar Wide 670

3156010 Sling Cross-bar

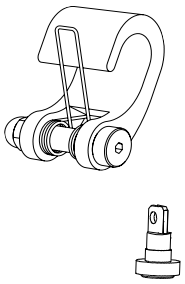
3156021 Sling Cross-bar 450

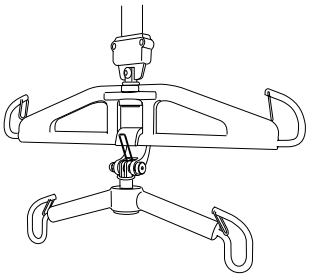
3156018 Sling Cross-bar 670

3156225 LikoScale 200 (Adapter 2016502 is required)

3156227 Scale 300 (Adapter 2016502 is required)

3156503 LikoScale 350 (Adapter 2016502 is required)





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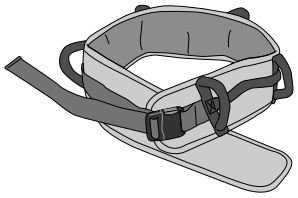
HandyBelt™

Instruction Guide

English
7EN160194-01



Product Description

HandyBelt is used for transfer support. Most commonly, the belt is applied on the patient, and the caregiver then uses the belt as an aid in the transfer. Alternatively, it can be applied on both patient and caregiver so that the patient also can use the belt as support when transferring.

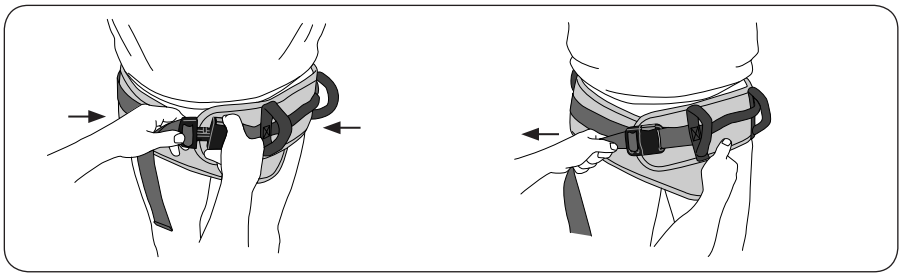
HandyBelt is equipped with a SafetyBuckle which has been strength-tested up to 200 kg (440 lbs.).

Read the instruction guide before use; it is important to thoroughly understand its contents. As caregiver, you are always responsible for the safety of the patient. You must ensure you are informed of the patient's ability to handle the transfer situation. If there is something you are unclear about, please contact the manufacturer or the supplier. Instruction guides can be downloaded free of charge from www.liko.com.

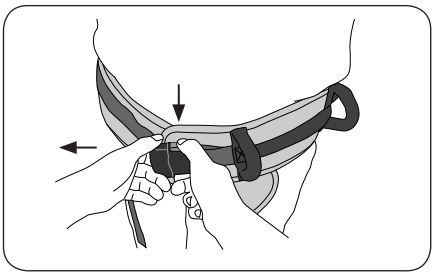
Before use, remember the following:

- Before the transfer, plan the transfer operation carefully to make it as safe and smooth as possible.
- Policy should be established to decide on a case by case basis whether one or more caregivers are needed.
- The patient should understand and follow the instructions so he/she can be guided to a natural pattern of movement during raising.
- The patient should have head and torso stability and be able to sit upright. When gait training, it is also important that the patient has good balance when standing and the ability to move his/her feet independently when walking.
- Before transferring, check that the HandyBelt is applied correctly.
- HandyBelt is not a lifting aid and the handles are not intended for lifting purposes.
- To minimize the strain for the caregiver, in case the patient should fall, it is important that the caregiver does not by his/her own efforts try to keep the patient in a standing position. Instead, we recommend that the caregiver, in a smooth motion, lower the patient to the floor. Remember to let go of the handles to avoid injuries to the caregiver's hands caused by crushing.
- Always work ergonomically - refer to the ISO 11228 Ergonomics Manual Handling.
- Check the HandyBelt regularly. Pay special attention to wear and damage on seams, fabric, straps, handles and SafetyBuckle. Do not use damaged transfer aids.

Application

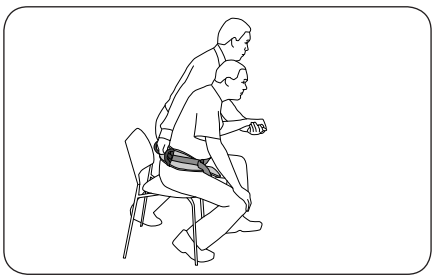


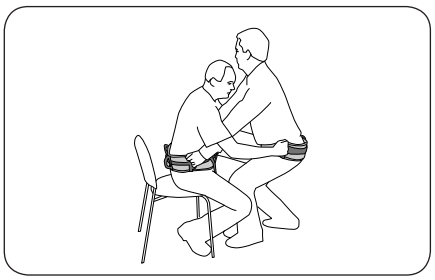
Removal

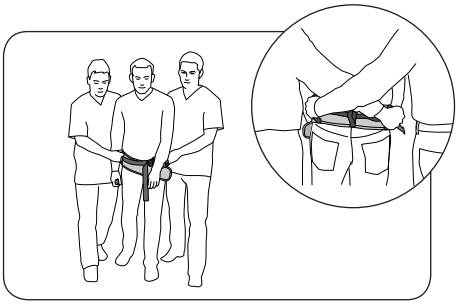


Areas of use

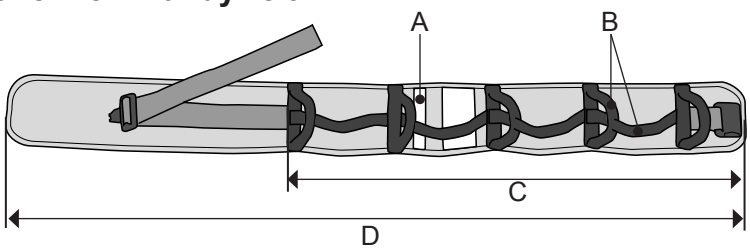
Raising from sitting to standing, transfer from sitting to sitting and support for standing/walking.







Overview HandyBelt



Name	Prod. No.	Size		Size Marking (A)	Number of Handles (B)	Length (C/D)
HandyBelt	3760014	S	Small	Orange	7	60/100 cm (24”/39”)
HandyBelt	3760015	M	Medium	Yellow	9	75/120 cm (30”/47”)
HandyBelt	3760016	L	Large	Blue	11	90/140 cm (35”/55”)
HandyBelt	3760017	XL	Extra Large	Black	13	110/180 cm (43”/71”)

Material: polyester

Washing instructions: 60-85°C 140-185°F

CE Medical device Class I

HandyBelt complies with the requirements for Medical Devices Directive Class I products (MDD 93/42/EEC).

Design and Quality by Liko in Sweden

Alternative Products

It is important to ensure that the transfer operation is not too strenuous for the caregiver. Should the patient need more support, Liko recommends other products from our extensive range of raising and walking aids. Please visit our website www.liko.com for further information.

Alternative products in the Liko range:

RollOn raising support
Sabina sit-to-stand lift
Liko LiftPants in combination with a patient lift
Liko MasterVest in combination with a patient lift

Liko’s products undergo continuous development, which is why we reserve the right to make product changes without prior notice. Contact your Liko representative for advice and information about product upgrades.

Liko is quality-certified in accordance with ISO 9001 and its equivalence for the medical device industry, ISO 13485.
Liko is also certified in accordance with environmental standard ISO 14001.

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A Hill-Rom Company

www.liko.com

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info@liko.se

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Fax: 508-528-6642
info@liko.com

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Stroudwater Business Park,
Stonehouse, Gloucester
GL10 3RU, United Kingdom
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Fax: +44 (0) 1453 828844
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7330925716285

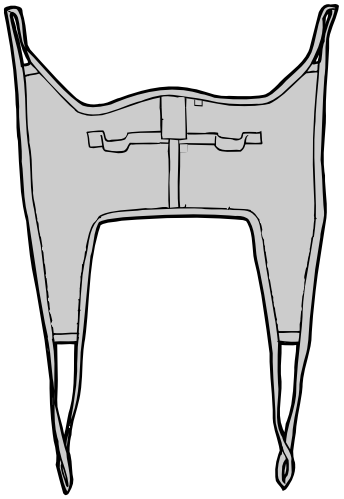
The Care and Maintenance of Liko Slings

American
7US160132-02
2007-11-21

Check all slings regularly, particularly after laundering.

Important checkpoints:

- Fabric
- Straps
- Seams
- Loops



Check all points closely for wear and damage.

Laundering:

Follow the laundry instructions on the sling.

Laundering temperature: 140-176 degrees F.
(Up to 200 degrees F only if the sling has no reinforcement in any parts of the sling and is not made of plastic-coated net)

Oxygen-based bleach recommended when required.

Chlorine bleach over 100 ppm will cause color change and may cause premature long term aging.

Avoid pure phenol-based disinfectants. Phenolic salts of 500 ppm or less are acceptable.

Tumble-drying: usually low temperature.

Drying cabinet or hanging preferred.

Drying of padded or reinforced parts may be accelerated by rolling them in a towel and pressing out the moisture prior to other drying methods.

General Advice:

All materials are compatible with quaternary ammonium compounds, glutaraldehyde, paracetic acid, alcohols, hydrogen peroxide, iodophor detergents and phenolic salts if cold disinfection is necessary prior to standard laundering. Follow chemical manufacturers' disinfection contact-time recommendations.

Cotton fabric has a shorter life span than nylon or polyester fabric.

The handles found on some slings are intended to steer, not lift, patients. Excessive force on the handles may break the seams or the fabric.

For further information on the care and maintenance of Liko slings, please contact Liko or your local Liko representative.

LIFTS WITH CARE

Liko

www.liko.com

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